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Galaxy
SCIENCE FICTION

SEPTEMBER 1956
35¢

The Other Man
By
THEODORE STURGEON

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PROJECT VANGUARD
By
WILLY LEY

•

Verbal Agreement
By
ARTHUR SELLINGS

•

AND OTHER STORIES

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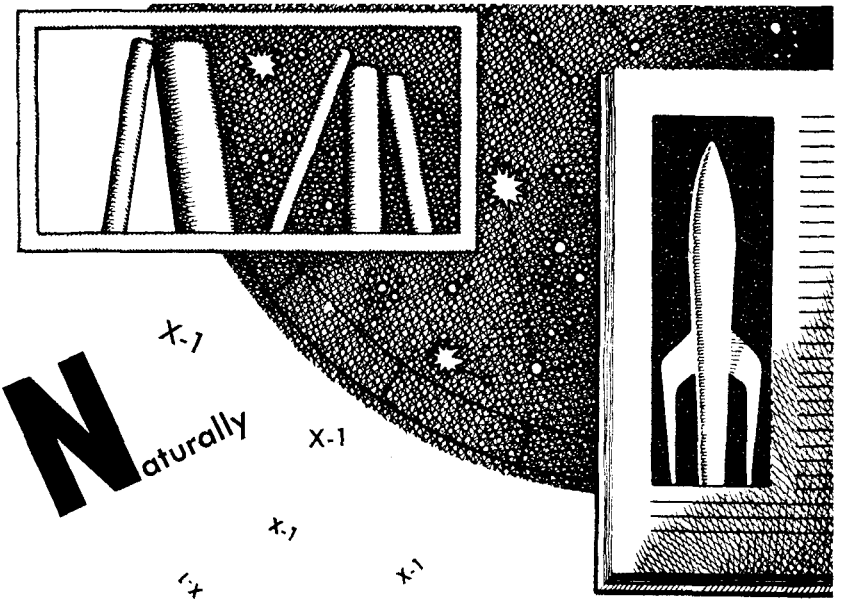

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SEPTEMBER, 1956 VOL. 12, NO. 5

Galaxy

SCIENCE FICTION

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the

Illustrated by GAUGHAN

WHEN he saw her again, he all but yelled — a wordless, painful bleat, one concentrated syllable to contain five years of loneliness, fury, self-revilement and that agony peculiar to the victim of "the other man." Yet he controlled it, throwing it with a practiced reflex to a tensing of his abdomen and the transient knotting of thigh muscles behind the desk, letting the impact strike as it should, unseen.

Outwardly, he was controlled. It was his job to know the language of eyelids, jaw muscles, lips, and it was his special skill to make them mute. He rose slowly as his nurse ushered her in and while she took the three short paces to meet him. He studied her with an impassive ferocity.

He might have imagined her in old clothes, or in cheap clothes. Here she was in clothes which were both. He had allowed, in his thoughts of her, for change, but he had not thought her nose might have been broken, nor that she might be so frighteningly thin. He had thought she would always walk like something wild . . . free, rather . . . but with stateliness, too, balanced and fine. And indeed she still did so; somehow that hurt him more than anything else could.

She stopped before the desk. He moved his hands behind him;

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other man

By THEODORE STURGEON

It was wholly, shockingly impossible

for him to take this case —

one reason everybody knew;

the other he kept to himself —

only there was not one single way

for him to get out of it!

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her gaze was on them and he wanted her to look up. He waited until Miss Jarrell discreetly clicked the door shut.

"Osa," he said at last.

"Well, Fred."

THE silence became painful. How long did that take — two seconds, three? He made a meaningless sound, part of a laugh, and came around the desk to shift the chair beside it. "Sit down, for heaven's sake."

She sat down and abruptly, for the first time since she had entered the office, she looked directly at him. "You look — you look well, Fred."

"Thanks." He sat down. He wanted to say something, but the only thing that would come readily to his lips was, "You're looking well, too"— such a patent lie that he couldn't tell it. And at last he found something else to say: "A lot has happened."

She nodded and her gaze found a corner of the tooled-leather blotter frame on the desk. She studied it quietly.

"Five years," she said.

Five years in which she must have known everything about him, at first because such a separation is never sharp, but ragged, raveled, a-crackle with the different snaps of different threads at different times; and later, because all the world knew what he was, what he had done. What he stood for.

For him, five years at first filled with a not-Osa, like a sheet of paper from which one has cut a silhouette; and after that, the diminishing presence of Osa as gossip (so little of that, because anyone directly involved in gossip walks usually in a bubble of silence); Osa as rumor, Osa as conjecture. He had heard that Richard Newell had lost — left — his job about the time he had won Osa, and he had never heard of him working again.

Glancing at Osa's cheap clothes now, and the new small lines in her face, he concluded that whatever Newell had found to do, it could not have been much. Newell, he thought bitterly, is a man God made with only one victory in him and he's used it up.

"Will you help me?" Osa asked stridently.

He thought, Was I waiting for this? Is this some sort of reward, her coming to me for help? Once he might have thought so. At the moment, he did not feel rewarded.

He sat looking at her question as if it were a tangible object, a box of a certain size, a certain shape, made of some special material, which was not to be opened until he had guessed its contents.

Will you help me? Money? Hardly — Osa may have lost a great deal, but her towering pride

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was still with her. Besides, money settles nothing. A little is never enough and helps only until it is gone. A little more puts real solutions a bit further into the future. A whole lot buries the real problem, where it lives like a cancer or a carcinogen.

Not money, then. Perhaps a job? For her? No, he knew her well. She could get her own jobs. She had not, therefore she didn't want one. This could only mean she lived as she did for Newell's sake. Oh, yes, he would be the provider, even if the illusion starved her.

Then a job for Newell? Didn't she know he couldn't be trusted with any responsible job and was not constituted to accept anything less? Of course she knew it.

All of which left only one thing. She must be sure, too, that Newell would accept the idea or she would not be here asking.

He said, "How soon can he start therapy?"

SHE *flickered,* all over and all at once, as if he had touched her with a high voltage electrode – the first and only indication she had evinced of the terrible tensions she carried. Then she raised her head, her face lit with something beyond words, something big enough, bright enough, to light and warm the world. His world. She tried to speak.

"Don't," he whispered. He put out his hand and then withdrew it. "You've already said it."

She turned her head away and tried to say something else, but he overrode that, too.

"I'll get paid," he said bluntly. "After his therapy, he'll earn more than enough –" (For both of us? For my bill? To pay you back for all he's done to you?) "– for everything."

"I should have known," she breathed. He understood. She had been afraid he wouldn't take Newell as a patient. She had been afraid, if he did take him, that he might insist on doing it free, the name of which was charity. She need not have worried. *I should have known.* Any response to that, from a shrug to a disclaimer, would destroy a delicacy, so he said nothing.

"He can come any time you say," she told him. This meant, *He isn't doing anything these days.*

He opened a desk book and riffled through it. He did not see it. He said, "I'd like to do some pretty intensive work with him. Six, eight weeks."

"You mean he'd stay here?"

He nodded. "And I'm afraid – I'd prefer that you didn't visit him. Do you mind very much?"

She hesitated. "Are you sure that . . ." Her voice trailed off.

"I'm sure I want to do it," he

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said, suddenly rough. "I'm sure I'll do everything I can to straighten him out, bar nothing. You wouldn't want me to say I was sure of anything else."

She got to her feet. "I'll call you, Fred." She watched his face for a moment. He did not know if she would want to shake his hand or—or not. She took one deep breath, then turned away and went to the door and opened it.

"Thank you . . ."

He sat down and looked at the closed door. She had worn no scent, but he was aware of her aura in the room, anyway. Abruptly he realized that she had not said "Thank you."

He had.

OSA didn't call. Three days, four, the phone ringing and ringing, and never her voice. Then it didn't matter—rather, she had no immediate reason to call, because the intercom whispered, and when he keyed it, it said in Miss Jarrell's clear tones, "A Mr. Newell to see you, Doctor."

Stupidly he said, "Richard A. Newell?"

Bzz Psss Bzz. "That's right, Doctor."

"Send him in."

"I beg your pardon?"

"Send him in," said the doctor. *I thought that's what I said. What did it sound like?* He couldn't remember. He cleared his throat painfully. Newell came in.

"We-ell, Freddy-boy." (Two easy paces; cocked head, half smile.) "A small world." Without waiting to be asked, he sat down in the big chair at the end of the desk.

At first glance, he had not changed; and then the doctor realized that it was the—what word would do?—the symphonic quality of the man, the air of perfect blending—it was that which had not changed.

Newell's diction had always suited the clothes he chose and his movements were as controlled as his speech. He still wore expensive clothes, but they were years old—yet so good they hardly showed it. The doctor was immediately aware that under the indestructible creases and folds was a lining almost certainly frayed through; that the elegant face was like a cheap edition printed from worn plates and the mind behind it an interdependence of flimsy parts so exactly matched that in the weak complex there was no weakest component. A machine in that condition might run indefinitely—idling.

The doctor closed his eyes with a brief impatience and consigned the concepts to the limbo of oversimplified analogies. "What do you want?"

Newell raised his eyebrows a

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fraction. "I thought you knew. Oh, *I* see," he supplemented, narrowing his eyes shrewdly. "One of those flash questions that are supposed to jolt the truth out of a man. Now let's see, just what did pop into my head when you asked me that?" He looked at the top of the window studiously, then leaned forward and shot out a finger. "More."

"More?"

"More — that's the answer to that question. I want more money. More time to myself. More fun." He widened his eyes and looked disconcertingly into the doctor's. "More women," he said, "and better. Just — more. You know. Can do?"

"I can handle only so much," said the doctor levelly. His thighs ached. "What you do with what I give you will be up to you . . . What do you know about my methods?"

"Everything," said Newell offhandedly.

WITHOUT a trace of sarcasm, the doctor said, "That's fine. Tell me everything about my methods."

"Well, skipping details," said Newell, "you hypnotize a patient, poke around until you find the parts you like. These you bring up by suggestion until they dominate. Likewise, you minimize other parts that don't suit you and drive them underground. You push and you pull and blow up and squeeze down until you're satisfied, and then you bake him in your oven — I'm using a figure of speech, of course — until he comes out just the proper-sized loaf. Right?"

"You —" The doctor hesitated. "You skipped some details."

"I said I would."

"I heard you." He held Newell's gaze soberly for a moment. "It isn't an oven or a baking."

"I said that, too."

"I was wondering why."

Newell snorted — amusement, patronization, something like that. Not irritation or impatience. Newell had made a virtual career out of never appearing annoyed. He said, "I watch you work. Every minute, I watch you work; I know what you're doing."

"Why not?"

Newell laughed. "I'd be much more impressed in an atmosphere of mystery. You ought to get some incense, tapestries in here. Wear a turban. But back to you and your bake-oven, what-do-you-call-it —"

"Psychostat."

"Yes, psychostat. Once you've taken a man apart and put him together again, your psychostat fixes him in the new pattern the way boiling water fixes an egg. Otherwise he'd gradually slip back into his old, wicked ways."

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He winked amiably.

Not smiling, the doctor nodded. "It is something like that. You haven't mentioned the most important part, though."

"Why bother? Everybody knows about *that*." His eye flicked to the walls and he half-turned to look behind him. "Either you have no vanity or you have more than anyone, Fred. What did you do with all the letters and citations that any human being would frame and hang? Where's all the plaques that got so monotonous on the newscasts?" He shook his head. "It can't be no vanity, so it must be more than anyone. You must feel that this whole plant — you yourself — are your citation." He laughed, the professional friendly laugh of a used-car salesman. "Pretty stuffy, Freddy."

The doctor shrugged.

"I know what the publicity was for," said Newell. "A fiendish plot to turn you into a personality kid for the first time in your life." Again the engaging smile. "It isn't hard to get you off the subject, Freddy-boy."

"Yes, it is," said the doctor without heat. "I was just making the point that what I do here is in accordance with an ethical principle which states that any technique resulting in the destruction of individual personality, surgical or otherwise, is murder. Your remarks on its being publicly and legally accepted now are quite appropriate. If you must use that analogy about taking a patient all apart and putting him together again in a different and better way, you should add that none of the parts are replaced with new ones and none are left out. Everything you have now, you'll have after your therapy."

"All of which," said Newell, his eyes twinkling, "is backed up by the loftiest set of ethics since Mohandas K. Gandhi."

THE twinkle disappeared behind a vitreous screen. The voice was still soft. "Do you suppose I'd be fool enough to put myself in your hands — *your* hands — if I hadn't swallowed you and your legendary ethics down to here?" He jabbed himself on the chest. "You're so rammed full of ethical conduct, you don't have room for an honest insult. You have ethics where most people carry their guts."

"Why did you come here," asked the doctor calmly, "if you feel that much animosity?"

"I'll tell you why," smiled Newell. "First, I'm enjoying myself. I have a sense of values that tells me I'm a better man than you are, law, fame and all, and I have seventy-odd ways — one of which you were once married to — to prove it. Why wouldn't anyone enjoy that?"

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"That was 'first.' You've got a 'secondly'?"

"A beaut," said Newell. "This one's for kicks, too: I think I'm the toughest nut you've ever had to crack. I'm real happy about the way I am — all I want is *more,* not anything *different.* If you don't eliminate my lovable character or any part of it — and you won't; you've stacked the deck against yourself — you'll wind up with just what you see before you, hi-fi amplified. And just for a little salt in the stew, I might as well tell you that I know you can't operate well without hypnosis, and I can't be hypnotized."

"You can't?"

"That's right. Look it up in a book. Some people can't be hypnotized because they won't, and I won't."

"Why not?"

Newell shrugged and smiled.

"I see," said the doctor. He rose and went to the wall, where a panel slid aside for him. He took up a shining hypodermic, snicked off the sterile sheath and plunged the needle into an ampoule. He returned to the desk, holding the hypodermic point upward. "Roll up your sleeve, please."

"I also happen to know," Newell said, complying readily, "that you're going to have one hell of a time sorting out drug-reaction effects from true responses, even with neoscopolamine."

"I don't expect my work to be easy. Clench your fist, please."

Newell did, laughing as the needle bit. The laugh lasted four syllables and then he slumped silently in his chair.

The doctor took out a blank case book and carefully entered Newell's name and the date and a few preliminary notes. In the "Medication" column, he wrote, *10 cc neutral saline solution.*

He paused then and looked at the "better" man and murmured, "So you can run a mile faster than Einstein."

"ALL ready, Doctor."

"Right away."

He went to the rack in the corner and took down a white coat. Badge of office, he thought, cloak of Hippocrates, evolved through an extra outdoor duster we used to wear to keep the bodily humours off our street clothes . . . and worn today because, for patients, the generalization "doctor" is an easier departure point for therapeutics than the bewildering specific "man." Next step, the juju mask, and full circle.

He turned into the west corridor and collided with Miss Thomas, who was standing across from Newell's closed door.

"Sorry!" they said in unison.

"Really my fault," said Miss Thomas. "I thought I ought to speak to you first, Doctor. He —

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he's not completely dismantled."

"They very frequently aren't."

"I know. Yes, I know that." Miss Thomas made a totally uncharacteristic, meaningless flutter of the hands and then welded them angrily to her starched flanks.

The doctor felt amusement and permitted it to show. Miss Thomas, his head technician, was neither human nor female during working hours, and the touch of color, of brightness in her lack of ease pleased him somehow.

She said, "I'm familiar with the — uh — unexpected, Doctor. Naturally. But after eighty hours of machine catalysis, I don't expect a patient to resemble anything but a row of parts laid out on a laboratory bench."

"And what does this patient resemble?"

There was a sudden, soft peal of delighted feminine laughter from the closed door. Together they looked at its bland surface and then their eyes met.

"Two hundred cycles," said Miss Thomas. "Listen to her."

They listened: Miss Jarrell's voice, a cooing, inarticulate Miss Jarrell, was saying, "Oh . . . you . . . you!" And more laughter.

Miss Thomas said severely, "I know what you're thinking about Hildy Jarrell, but don't. That's exactly what I did myself." Again she made the uncharacteristic flutterly gesture. "Oh-h!" she breathed impatiently.

Because his impulses were kind, the doctor ignored most of this and picked up only, "Two hundred cycles. What do you get at the other frequencies?"

"Oh, that's all right, all of it. Average response. Pre-therapeutic personality responds best at eighty cycles. Everywhere else, he's nice and accessible. Anyway," she said a little louder, obviously to drown out another soft sudden chuckle from behind the door, "I just wanted you to know that I've done what I can. I didn't want you to think I'd skipped anything in the spectrum. I haven't. It's just that there's a personality in the 200-cycle area that won't dismantle."

"Yet," he corrected mildly.

"Oh, *you* can do it," she said in rapid embarrassment. "I didn't mean . . . I only meant . . ."

SHE drew a deep breath and started over. "I just wanted you to be sure *my* job's done. As to what you can do, you'll handle it, all right. Only —"

"Only what, Miss Thomas?"

"It's a pity, that's all," she blurted, and pushed past him to disappear around the corner.

He shook his head, puzzlement and laughter wrestling gently deep inside him. Only then did something she had said fully reg-

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ister with him: "... *there's a personality in the 200-cycle area that won't dismantle.*"

That woman, he thought, has the kind of precision which might be clouded by emotion, but nothing would eliminate it. If she said there's a personality in the 200-cycle area, she meant just that. A personality, not a component or a matrix or a complex.

As she herself had put it, after catalysis a patient should resemble nothing more than a row of parts on a lab bench. Down through the levels of hypnosis, audible frequencies would arbitrarily be assigned to various parts of the personality, and by suggestion each part would respond to its frequency throughout the therapy. Any part could be summoned, analyzed, then minimized, magnified, stressed or quelled in the final modulation and made permanent in the psychostat. But at the stage Newell was in – should be in – these were *parts,* sub-assemblies at most. What did she mean "a personality" in the 200-cycle area?

She was wrong, of course. *Oh, God,* he thought, *she's wrong, isn't she?*

He opened the door.

Miss Jarrell did not see him. He watched for a long moment, then said, just loud enough to be heard over the soft thrumming of the 200-cycle note from the speakers, "Don't stop, Miss Jarrell. I'd like to see a little more of this."

Miss Jarrell flung up a scarlet face.

The doctor said again, quietly but with great force, "Go on, please."

She turned away to the bed, her back held with a painful rigidity and her ears, showing through her hair, looking like the tips of bright little tongues.

"It's all *right,*" soothed the doctor. "It's all right, Miss Jarrell. You'll see him again."

She made a soft sound with her nostrils, grinned ruefully and went to the controls. She set one of them for the patient's allotted sleep-command frequency and hit the master switch. There was a gentle explosion of sound—"white" noise, a combination of all audio frequencies, which served to disorient the dismantled patient, his reflexive obedience attempting to respond to all commands at once —for ten seconds, and then it automatically faded, leaving the 550-cycle "sleep" note. The patient's face went blank and he lay back slowly, his eyes closing. He was asleep before his head reached the pillow.

THE doctor stood suspended in thought for some time. Miss Jarrell gently arranged the patient's blanket. It was not done

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dutifully nor as part of the busyness of waiting for his next move. For some reason, it touched the doctor deeply and pulled him out of his reverie. "Let's have the P.T., Miss Jarrell."

"Yes, Doctor." She consulted the index and carefully set the controls. At his nod, she touched the master switch. Again the white noise, and then the deep moo of the 80-cycle tone.

The P.T. — pre-therapeutic — personality would be retained untouched throughout the treatment, right up until the final setting process in the psychostat, except, of course, for the basic post-hypnotic command which kept all segments under control of the audio spectrum. The doctor watched the sleeping face and was aware of a most unprofessional desire to have something other than that untouched P.T. appear.

He glanced at Miss Jarrell without turning his head. She should leave now, and ordinarily she would. But she was not behaving ordinarily just now.

The patient's eyes half-opened and stayed that way for a time. It was like the soft startlement of a feline which is aware of something, undecided whether the something deserves more attention than sleep, and therefore simply waits, armed and therefore relaxed.

Then he saw the eyes move, though the lids did not. This was the feline taking stock, but deluding its enemies into thinking it still drowsy. The man changed like an aurora, which is ever the same while you watch, but something quite different if you look away and look back again. *I think in analogies,* the doctor chided himself, *when I don't like the facts.*

"Well, Freddy-boy," drawled Richard A. Newell.

Behind him, he heard Miss Jarrell's almost inaudible sigh and her brisk quiet footsteps as she turned on the speech recorder, crossed the room and closed the door behind her.

Newell said, "Nurse is an odd term for a woman built like that. How you doing, Freddy?"

"Depends," said the doctor.

Newell sat up and stretched. He waved at the red eye of the recorder. "Everything I say is taken down and may be used against me, hm?"

"Everything is used, yes. Not—"

"Oh, spare me the homilies, Fred. Transcribe them yourself, do you?"

"I — no." As he caught Newell's thought, and knew exactly the kind of thing the man was going to do next, he felt himself filling up with impotent rage. It did not show.

"Fine, fine." Projecting his voice a bit, Newell said over an elabo-

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rate yawn, "Haven't waked up like this since I was a kid. You know, disoriented, wondering for a moment where I was. Last bed I was in wasn't so lonesome. Missed thirty of those last forty winks, the way she was all over me. 'Dick, oh, Dick, please . . .'" he mimicked cruelly. "Told her to shut up and get breakfast."

HE laughed outright, obviously not at anything he had said, but at the writhing silent thing within the doctor, which he could not see but knew must be there.

He glanced again at the pilot light on the recorder and said, "Mentioning no names, of course," and the doctor understood immediately that names would be mentioned, places, dates and interrelationships, whenever Newell chose . . . which would be when the suspense ceased to entertain him. Meanwhile, the doctor could prepare himself for the behind-the-back gossip, the raised eyebrows of the transcribing typist, the after-hours debates as to the ethical position of a doctor's practicing on the man who had . . . who was . . .

The sequence spiraled down to a low level of his personal inferno and flickered there, hot and smokeless.

"You didn't tell me," said Newell. "How you doing? Find the secret of my success yet?"

The doctor shrugged easily, which was not easy to do. "We haven't begun."

"Thought not." Newell snorted. "By the time you're finished, you won't have begun, either."

"Why do you say that?"

"I extrapolate it. I come here, you give me a shot of knockout drops, I get a sound sleep and wake up rested and cheerful. Otherwise, nothing. Yet I know that you've taken my slumbering corpus, poked it, prodded it, checked it in and wrung it out, tooted on your tooters, punched cards and clicked out four miles of computer tape—for what? I'm still me, only rested up a little."

"How do you know we did all that?"

"I read the papers." When the doctor made no reply, Newell laughed again. "You and your push-button therapy." He looked up in recall, as if reading words off the ceiling. "What's the claim—82% of your patients cured?"

"Modulated."

"Pretty word, modulated. Pretty percentage, too. What kind of a sieve do you use?"

"Sieve?"

"Don't tell me you don't select your patients!"

"No, we take them as they come."

"Ha. You talk like the Lysenkoists. Remember them? Russian genetics experts fifty years back.

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They claimed results like that. They claimed non-selective methodology, too, even when some of the people supposed to be breeding split-kernel corn were seen splitting the kernels with a knife. Even the Communists rejected them after a while." He flicked a wolfish glance at the recorder and grinned. "But then," he said clearly, "no Communist would reject *you*, Freddy."

Of the four possible responses which came to him, the doctor could find none that would sound unlike a guilty protest, so he said nothing. Newell's widening grin informed him that his silence was just as bad.

"Ah, Fred, m'boy, I know you. I know you well. I knew a lot about you five years ago and I've learned a lot more since." He touched the dark wiry tuft between his collarbones. "Like, for example, you haven't a single hair on your chest. Or so I've been told."

AGAIN the doctor used silence as a rejoinder. He could examine his feelings later — he knew he would; he inescapably must. For now, he knew that any answer would fall into Newell's quiver as new arrows. Silence was a condition Newell could not maintain nor tolerate; silence made Newell do the talking, take the offensive . . . inform on and expose his own forces. Silence Newell could use only sometimes; words, always.

Newell studied him for a moment and then, apparently deciding that in order to return to a target, it was necessary to leave it temporarily, looked at the compact control panel. "I've read a lot about that. Push one button, I'm a fighting engine. Push another, I lie down with the lamb. *Who was it once said humanity* will evolve into a finger and a button, and every time the finger wants anything, it will push the button — and that will be the end of humanity, because the finger will get too damn lazy to push the button?" He wagged his head. "You're going to gadget yourself clear out of a living, Fred."

"Did you read what was written over the entrance when you came here?" the doctor asked.

"I noticed there was something there," said Newell amiably, "and no, I didn't read it. I assumed it was some saw about the sanctity of the personality, and I knew I'd get all I could stand of that from you and your acolytes."

"Then I think you ought to know a little more about what you call 'push-button therapy,' Newell. Hypnosis isn't therapy and neither is the assigned audio-response technique we use. Hypnosis gives us access to the segments of personality and creates

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a climate for therapy, and that's all. The therapy itself stands or falls on the ability of the therapist, which is true of my school as it is of all others short of the lobotomists."

"Well, well, well. I goaded a real brag out of you at last. I didn't know you had it in you." Newell chuckled. "82% effective and you do it all your little self. Now ain't you something? Tell me, able therapist, how do you account for the 18% who get by you?"

"Why do you want to know?"

"I might alter the figures for you. Who are these sturdy souls?"

"Organic defectives," said the doctor. *And certain others* . . . but he kept that to himself.

Newell shouted, "Touché!" and fell back with a roar of appreciative laughter. But the doctor saw his eyes before he closed them, little windows with all the faces of hate looking out.

The doctor was delighted. He braced himself for the reaction against his own pleasure which he could always expect from his austere professionalism, but it did not come. He put this fact away with the others he knew he must examine later.

NEWELL was saying, "You can't have it both ways, Fred. About hypnosis not being therapy, I mean. What's this I heard somewhere about certain frequencies having certain effects, no matter who you are?"

"Oh, that. Yes, some parts of the audio spectrum do affect most people. The subsonics – fourteen to around twenty cycles, for example, if you use enough amplitude—they scare people. And beat-frequencies between two tones, where the beat approaches the human pulse, sometimes have peculiar psychological effects. But these are byways, side phenomena. We use the ones we can rely on and ignore or avoid the others. Audio frequencies happen to be convenient, accurate and easy for patient and therapist to identify.

"But they're not essential. We could probably do the same thing with spoken commands or a spectrum of odors. Audio is best, though; the pure electronic tone is unfamiliar to most people and so has no associations except the ones we give it. That's why we don't use 60 cycles – the hum you're surrounded by all your life from AC devices."

"And what about if you're tone-deaf?" asked Newell, with an underlay of gloating which could only mean that he was talking about himself.

"Nobody's *that* tone-deaf, except the organic defectives."

"Oh," said Newell disappointedly, then returned to the half-

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sneering search for information. "And so the patient walks out of here prepared for the rest of his life to go into a state of estrus every time an English horn sounds A-440?"

"You know better than that," retorted the doctor, for once not concealing his impatience. "That's what the psychostat is for. Every frequency the patient responds to is recorded there—" he waved at the controls—"along with its intensity. These are analyzed by a computer and compared by another one with a pattern which shows which segments are out of line—like too much anger or unwarranted fear, in terms of the patient's optimum. The psychostat applies dampers on the big ones and amplifies the atrophied ones until the response matches the master pattern. When every segment is at optimum—the patient's, mind you; no one else's—the new pattern is fixed by an overall post-hypnotic which removes every other suggestion that has been applied."

"So the patient *does* go out of here hypnotized!"

"He walks in here hypnotized," said the doctor. "I'm surprised at you, Newell. For a man who knows so much about my specialty, you shouldn't need to be lectured on the elementals."

"I just like the sound of your voice," Newell said acidly, but the acid was dilute. "What do you mean, the patient walks in here hypnotized?"

"Most people are, most of the time. In the basic sense, a man is under hypnosis whenever any one of his senses does not respond to a present stimulus, or when his attention is diverted even slightly from his physical surroundings. You're under hypnosis when you read a book, or when you sit and think and don't see what you're staring at, or when you bark your shin on a coffee-table you didn't see under bright lights."

"That's so much hair-splitting." Newell didn't even pause before his next sentence, which came from quite a different area than his scoffing incredulity. "Why didn't you tell me all this when I said I couldn't be hypnotized?"

"I preferred to believe you when you said you knew it all."

EVERY pretense of joviality disappeared. "Listen, you," Newell grated, in the ugliest tone of voice the doctor had ever heard, "you better watch what you're doing."

It was time again for silence and the doctor used it. He gave Newell no choice but to lie there and stare at his own words. He watched the man regaining his poise, laboriously, hand over hand, then resting, testing, waiting to be sure he could speak again.

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"Well," Newell said at length, and the doctor almost admired him for the smoothness of his tone, "it's been fun so far and it'll wind up more so. If you really can do what you say, I'll make it right with you, Freddy-boy. I'll really pay off."

"That's nice," said the doctor guardedly.

"Nice? Just nice? Man, I'll give you a treasure you couldn't get any other way. *You* could never get," he amended. He looked up into the doctor's face brightly. "Nearly five solid years a-building and it's all yours. Me, I'll start a new one."

"What are you talking about?"

"My little black book. Got everything in it from pig to princess. Whoever you are, however you feel from time to time, there's a playmate in there for you. You could really use it, Freddy. You must have stored up quite a charge since you-know-what," he said, grinning at the recording machine. "Fix me up, I fix you up. Fair enough?"

The silence this time was unplanned. The doctor walked to the controls, dialed 550 and hit the master. The 80-cycle note died, the white noise took over, and then the 550-cycle sleep command. The doctor felt that gleaming grin leave the room like a pressure off his back.

He is a patient, the doctor thought at last, out of his hard-held numbness. He is a patient in a therapeutic environment as detached from the world as a non-Euclidean theorem. There is no Newell; there is only a patient. There is no Fred, only a doctor. There is no Osa, only episodes. Newell will be returned to the world because he has a personality and it has an optimum, because that is what I do here and that is what I am for.

He touched the annunciator control and said, "Miss Jarrell, I want you."

She opened the door almost immediately; she must have been waiting in the corridor. "Oh, Doctor, I *am* sorry! I know I shouldn't do anything like that. It's just — well, before I knew it . . ."

"Don't apologize, Miss Jarrell. I mean it — don't. You may even have done some good. But I have to know exactly what influences were . . . no, don't explain," he said when she tried to speak. "Show me."

"Oh, I couldn't! It's so — *silly!*"

"Go on, Miss Jarrell. It isn't silly at all."

FLUSHING, she passed him with her eyes averted and went to the controls. She dialed a frequency and activated the master, and as the white noise roared out, she went to the foot of the bed, waiting. The audio faded, all

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but a low, steady thrum—200 cycles.

The patient opened his eyes. He *smiled*. It was a smile the like of which the doctor had never seen before, though he might have imagined one. Not, however, on the face of Richard A. Newell. There was nothing conceivable in Richard A. Newell to coexist with such an expression.

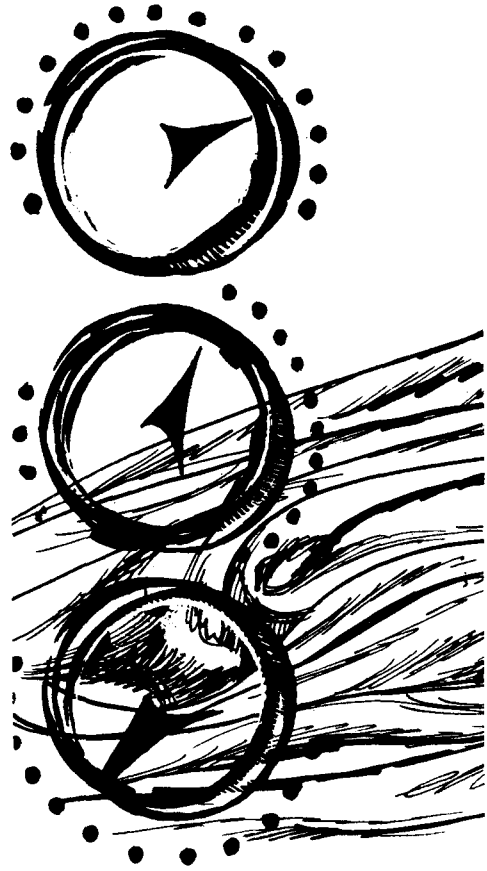
The patient glanced down and saw Miss Jarrell. Ecstatic recognition crossed his face. He grasped the covers and whipped them over his head, and lay stiff and still as a pencil.

"You . . .!" crooned Miss Jarrell, and the blanket was flung down away from the patient's head, and he gurgled with laughter. She snatched at his toes, and he bucked and chortled, and covered up again. "The bumble bee—" she murmured, and he quivered, a paroxysm of delighted anticipation—"goes round the tree . . . and goes bzz . . . *bzzz* . . . BZZ!" and she snatched at his toes again.

He whipped the blanket away from his face and gave himself up to an explosion of merriment which was past vocalization—in fact, but for that soft and intense chuckle, he had made hardly a sound.

"You . . ."

The doctor watched and slowly felt a vacuum in the scene somehow, and a great tugging to fill it



with understanding, and the understanding would not come until the word "ridiculous" slipped through his mind . . . and that was it: This should be ridiculous, a grown man reacting like a seven-month infant. What was extraordinary was that it was *not* ridiculous and that it was indeed a

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grown man, not a mere infantile segment.

It was a thing to be felt. There was a — a radiance in these bursts of candid merriment which, though certainly childlike, were not childish. It was a quality to be laughed with, not laughed at.

He glanced at the audio selector. Yes, this was the 200-cycle response that Miss Thomas had mentioned. "A personality —" He began to see what she had meant. He began, too, to be afraid.

He went to the wall rack where the technician's response-breakdown was clipped. It was a standard form, one column showing the

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frequencies arbitrarily assigned to age levels (700 cycles and the command suggestion: "You are eleven years old") and another column with the frequencies assigned to emotional states (800 cycles and "You are very angry;" 14 cycles, "You are afraid").

Once the patient was completely catalyzed, response states could readily be induced and their episodic material extracted — fear at age three, sexuality at fourteen, fear plus anger plus gratification at age six, or any other combination.

The 200-cycle area was blotchy with Miss Thomas's erasures, but otherwise blank.

The doctor inwardly shook himself and got a firm grip. He went to the bed and stood looking down at that sensitive, responsive face.

"Who are you?" he asked.

THE patient looked at him, eyes bright, a glad, anticipatory smile on his lips. The doctor sensed that the man did not understand him, but that he was eager to; further, that from the bottom of his heart the man was prepared to be delighted when he did understand. It filled the doctor with an almost tender anxiety, a protectiveness. This creature could not be disappointed — that would be inartistic to the point of gross injustice.

"What's your name?" the doctor pursued.

The patient smiled at him and sat up. He looked into the doctor's eyes with an almost unbearable attention and a great waiting, ready to treasure whatever might come next if only — if only he could identify it.

One thing's certain, mused the doctor: this was no infantile segment. Child, yes, but not quite child.

"Miss Jarrell."

"Yes, Doctor."

"The initial, the middle initial on the chart. It's 'A.' What does that stand for?"

After a moment, "Anson," she said.

To the patient, he said, "I'm going to call you Anson. That will be your name." He put his hand on the patient's chest. "Anson."

The man looked down at the hand and up, expectantly, at the doctor.

The doctor said, touching his white coat, "Doctor. Doctor." He pointed at Miss Jarrel. "Miss —"

"Hildy," said Miss Jarrell quickly.

The doctor could not help it; he grinned briefly. This elicited a silent burst of glee from the patient, which was shut off instantly, to be replaced by the anticipation, the watchful and ready attentiveness. He burdened the doctor with his waiting and the necessity

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to appreciate. Yet what burden was it, really? This creature would appreciate the back of a hand across the face or two choruses of the Londonderry Air.

The doctor poised over the bed, waiting for an answer, and it came:

The burden lay in the necessity not to please this entity, but to do this thing properly, in ways which would never have to be withdrawn later. *He trusts me*—there, in three words, was the burden.

The doctor took the patient's hand and put the fingertips close to his lips. "An-son," he said. Then he put the hand to the patient's own mouth, nodding encouragingly.

The patient obviously wanted to do it right, too—more, even, than the doctor. His lips trembled. Then, "An-son," he said.

Across the room, Miss Jarrell clapped her hands and laughed happily.

"That's right," smiled the doctor, pointing. "Anson. You're Anson." He touched his own chest. "Doc-tor." He pointed again. "Miss Hildy."

The man in the bed sat up slowly, his eyes on the doctor's face. "An-son. Anson." And then a light seemed to flood him. He hit his chest with his knuckles. "Anson!" he cried. He felt his own biceps, his face, and laughed.

"That's right," said the doctor.

"Doc . . . tok," said Anson with difficulty. He looked wistful, almost distraught.

"That's okay. That's good. Doctor."

"Doc-tor." Anson turned brightly to Miss Jarrell and pointed. "Miss Hildy!" he sang triumphantly.

"Bless you," she said, saying it like a blessing.

WHILE Anson grinned, the doctor stood for a moment grinning back like a fool and feeling frightened and scratching his head.

Then he went to work.

"Richard," he said sharply, and watched for a reaction.

There was none, just the happy eagerness.

"Dick."

Nothing.

"Newell."

Nothing.

"Hold up your right hand. Close your eyes. Look out of the window. Touch your hair. Let me see your tongue."

Anson did none of these things.

The doctor wet his lips. "Osa."

Nothing.

He glanced at Miss Jarrell. "Anson," he said, and Anson increased his attention. It was startling; the doctor hadn't known he could. "Anson, listen." He pulled back his sleeve and showed his watch. "Watch. Watch." He held

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it close, then put it to Anson's ear.

Anson gurgled delightedly. "Tk tk," he mimicked. He cocked his head and listened carefully to the doctor repeating the word. Then, "Wats. Watts. *Watch,*" he said, and clapped his hands exactly as Miss Jarrell had done before.

"All right, Miss Jarrell. That's enough for now. Turn him off."

He heard her intake of breath and thought she was going to speak. When she did not, he faced her and smiled. "It's all right, Miss Jarrell. We'll take good care of him."

She looked for the sarcasm in his face, between his words, back in recall, anywhere, and did not find it. She laughed suddenly and heartily; he knew she was laughing at herself, spellbound as she had been, anxious for the shining something which hid in the 200-cycle area.

"I could use a little therapy myself, I guess," she said wonderingly.

"I would recommend it to you if you had reacted any other way."

She went to the door and opened it. "I like working here," she said, blushed, and went out.

The doctor's smile disappeared with the click of the latch. He glanced once at the patient, then moved blindly to the controls. He locked them and went back to his office.

MISS THOMAS knocked. Getting no answer, she entered the doctor's office. "Oh, I beg your pardon, I thought you were still—"

The expression on his face halted her. She took the reports she carried and put them down on the desk. He did not move. She went to the cabinet, which slid open for her, and shook two white pills from a vial. She broke a beam with a practiced flick of the wrist. A paper cup dropped and filled with ice-water. She took it to the doctor. "Here."

He said rapidly, "What? What? What?" and, seeking, looked the wrong way to find her voice. He turned again, saw her. "What?" and put his hand for a moment over his eyes. "Oh, Miss Thomas."

"Here," said the technician again.

"What is it?" He seemed to be trying to identify the cup, as if he had never seen one before.

Because she was kind, Miss Thomas took it another way. "Dexamyl."

"Thank you." He took them, swallowed water, and looked up at her. "Thank you," he said again. "I seem to be . . ."

"It's all right," said Miss Thomas firmly. "Everything's all right."

Some of his control returned and he chuckled a little. "Using my own therapy on me?"

"Everything *is* all right, far as

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I know," she said, in the grumpy tone under which she so often concealed herself. She folded her arms with an all but audible snap and glared out of the window.

The doctor glanced up at her rigid back and, in spite of himself, was amused. She was daring him to order her out, challenging him not to tell her what the trouble was. He recalled, then, that she was doubtlessly gnawed like the Spartan boy by the fox of curiosity she was hiding under her starch. *There's a personality in the 200-cycle area that won't dismantle . . . oh, you can do it, but . . . it's a pity, that's all*, he recalled.

He said, "It's one of those things of Prince's."

She was quiet for so long that she might not have heard him and I'm damned, he thought, if I'm going to spell it out for her.

But she said, "I don't believe it," and, into his continued silence, "Morton Prince's alternate-personality idea might be the only explanation for some cases, but it doesn't explain this one."

"It doesn't?"

"Two personalities in one mind – three or more sometimes. One of his case histories was of a woman who had five distinct egos. I'm not quarreling with the possibility, Doctor."

Every time Miss Thomas surprised him, it was in a way that pleased him. He would, he thought, think that through some day.

"Then why quarrel with this one?" he asked.

UNASKED and unabashed, she sat down in the big chair. They sat for a time in a companionable, cerebral quiet.

Then she said, "Prince's case histories show a lot of variation. I mean one ego will be refined, educated, another rough and stupid. Sometimes the prime was aware of the others, sometimes not; sometimes they hated each other. But there was this denominator: If the condition existed at all, it existed because the alternate ego *could* communicate and did. Had to."

"Morton Prince wasn't equipped for segmentation under tertiary hypnosis."

"I think that's beside the point," Miss Thomas said flatly. "I'll say it again: Prince's alternate egos *had* to emerge. I think that's the key. If an ego can't communicate and won't emerge unless you drag it out by the scruff of the neck, I don't think it deserves to be called an ego."

"You can say that and yet you've seen Ans – the alternate?"

"Anson. Hildy Jarrell told me about the christening. Yes, I can say that."

He looked at her levelly and

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she dropped her eyes. He remembered again their encounter in the corridor in front of Newell's door. *Don't blame Hildy Jarrell—that's exactly what I did myself.*

"Miss Thomas, why are you trying to herd me away from this case?"

"Doctor!"

He closed his eyes and said, "You find a segment that you can't break. It's a particularly—well, let's say that whatever it is, you like it." He paused and, exactly in time, said, "Don't interrupt me. You know very well that the rock bottom of my practice is that personality is inviolate. You know that if this is a genuine case of alternate ego, I wouldn't touch it—I couldn't, because the man has only one body, and to normalize him, I'd have to destroy one ego or the other.

"Now you knew perfectly well that I'd discover the alternate. So the first thing you do is call my attention to it, and the next thing you do is give me an argument about it, knowing I'd disagree with you, knowing that if there was any doubt in my mind, it would disappear in the argument."

"Why on earth would I do a thing like that?" she challenged.

"I told you—so I'd get off the case—reset the P.T. and discharge him."

"Damn it," said Miss Thomas bitterly.

"THAT'S the trouble with knowing too much about a colleague's thought processes," he said into midair. "You can't manipulate somebody who understands you."

"Which one of us do you mean?" she demanded.

"I really don't know. Now are you going to tell me why you tried this, or shall I tell you?"

"I'll tell you," said Miss Thomas. "You're tired. I don't want anything to happen to that Anson. As soon as I found him, I knew exactly what would happen if you went ahead with Newell's therapy. Anson would be the intruder. I don't care how—how beautiful an intruder he might be, he could only show up as an aberration, something extraneous. You'd pack him down to pill size and bury him so deep in a new-model Newell that he'd never see daylight again. I don't know how much consciousness he has, but I do know I couldn't bear to have him buried alive.

"And supposing you committed therapy on Anson alone, brought him up like a shiny young Billy Budd and buried that heel Newell—if you'll pardon the unprofessional term, Doctor—down inside him somewhere? You think Anson would be able to defend himself? You think he could take a lane in the big rat race? This world is no place for cherubim.

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"So there isn't a choice. I don't know what Anson shares with Newell and I never will. I do know that however Anson has existed so far, it hasn't spoiled him, and the only chance he has to go on being what he is is to be left alone."

"*Quod erat demonstrandum*," said the doctor, spreading his hands. "Very good. Now you know why I've never treated alternate ego cases. And perhaps you also know how useless your little machination was."

"I had to be sure, that's all. Well, I'm glad. I'm sorry."

He smiled briefly. "I follow that." He watched her get up, her face softened by content and her admiration of him unconcealed.

She bent an uncharacteristically warm gaze on him and moved toward the door. She looked back once on the way, and once there, she stopped and turned to face him. "Something's the matter."

There were, he knew, other ways to handle this, but at the moment he had to hurt something. There were several ways to do the hurt, too, and he chose the worst one, saying nothing.

Miss Thomas became Miss Thomas again, her eyes like one-way mirrors and her stance like a soldier. She looked out of herself at him and said, "You're going on with the therapy."

He did not deny it.

"Are you going to tell me which one gets it?"

"Depends on what you mean by 'gets it,'" he said with grim jocularity.

She treated the bad joke as it deserved to be treated and simply waited for it to go away.

He said, "Both."

SHE repeated the word in exactly his inflection, as though she could understand it better if it were as near as her own lips. Then she shook her head impatiently. "You can apply just so much therapy and then there's a choice to make."

"There's this choice to make," he said, in a constricted tone that hurt his throat. "Newell lives in a society he isn't fit for. He's married to a woman he doesn't deserve. If it is in my power to make him more fit and more deserving, what is the ethical choice?"

Miss Thomas moved close to the desk. "You implied that you'd turned down cases like this before. You sent them back into society, untreated."

"Once they sent lepers back untreated," he snapped. "Therapy has to start somewhere, with someone."

"Start it on rats first."

I am, he said, fortunately to himself. He considered her remark further and decided not to

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answer it, knowing how deeply she must regret saying it.

She said, "Hildy Jarrell will quit when she finds this out."

"She will not quit," said the doctor immediately and positively.

"And as for me—"

"Yes?"

Their gazes locked like two steel rods placed tip to tip, pressing, pressing, knowing that some slight wavering, some side drift, must come and must make a break and a collision.

But instead, she broke. She closed her eyes against tears and clasped her hands. "Please," she whispered, "do you have to go through with this? Why? Why?"

Oh, God, he thought, I hate this. "I can't discuss it." That, he thought painfully, is altogether the truth.

She said heavily, "I don't think you should." He knew it was her last word.

"It is a psychological decision, Miss Thomas, and not a technological one." He knew it was unfair to fall back on rank and specialty when he no longer had an argument he could use. But this had to stop.

She nodded. "Yes, Doctor." She went out, closing the door too quietly. He thought, What do you have to be to a person so you can run after someone crying, Come back! Come back! Don't hate me! I'm in trouble and I hurt!

IT took Miss Jarrell about forty minutes to get to the office. The doctor had figured it at about thirty-five. He was quite ready for her.

She knocked with one hand and turned the knob with the other and flew in like an angry bee. Her face was flushed and there was a little pale tension-line parenthesizing each nostril. "Doctor—"

"Ah, Miss Jarrell," he said with a huge joviality. "I was just about to call you. I need your help for a special project."

"Well, I'm sorry about *that*," she began. Her eyes were wide and aflame, and the rims were slightly pink. He wished he could magic a few minims of azacyclonol into her bloodstream; she could use it. "I've come to—"

"The Newell case."

"Yes, the Newell case. I don't think—"

He had almost to shout this time. "And *I* think you're just the one for the job. I want that 200-cycle entity—you know, Anson—I want him educated."

"Well, I think it's just—*what?*" And as the angry syllable ricocheted around the office, she stared at him and asked timidly, "I beg your pardon?"

"I'd like to relieve you of your other duties and put you with Anson full time. Would you like that?"

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"Would I like . . . what will I do?"

"I want to communicate with him. He needs a vocabulary and he needs elementary instruction. He probably doesn't know how to hold a fork or blow his nose. I think you can do a good job of teaching him."

"Well, I – why, I'd love to!"

"Good. Good," he said like a department-store Santa Claus. "Just a few details. I'll want every minute on sound film, from white noise to white noise, and I'll want to review the film every day. And, of course, I'd have to ask you not to discuss this with anyone, on or off the staff. It's a unique case and a new therapy, and a lot depends on it. On you."

"Oh, you can depend on me, Doctor!"

HE nodded agreement. "We'll start tomorrow morning. I'll have the first word-lists and other instructions ready for you by then. Meanwhile, I've got some research to do. Contact the Medical Information Service in Washington and have them key in Prince, Morton, and Personality, Multiple, on their Big Brain. I want abstracts of everything that has been published in the last fifty years on the subject. No duplicates. An index. Better order microfilm and send it by telefax, AA priority."

"Yes, Doctor," said Miss Jarrell eagerly. "Foreign publications too?"

"Everything any researcher has done. And put a Confidential on the order as well as the delivery."

"*Really* secret."

"Really." He concealed the smile which struggled to show itself: in his mind, he had seen the brief image of a little girl hiding jelly-beans. "And get me the nurses' duty-list. I have some juggling to do."

"Very well, Doctor. Is that all?"

"All for now."

She nearly skipped to the door. He saw a flash of white as she opened it; Miss Thomas was standing in the outer office. He could not have been more pleased if she had been there by his explicit orders, for Miss Jarrell said, as she went out, "And thank you, Doctor – thank you *very* much."

Chew on that, Thomas, he thought, feeling his own small vindictiveness and permitting himself to enjoy it for once.

And: Why am I jumping on Thomas?

Well, because I have to jump on somebody once in a while and she can take it.

Why don't I tell her everything? She has a good head. Might have some really good ideas. Why not?

Why not? he asked again into a joyless void. Because I could be

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wrong. I could be so wrong. That's why not.

THE research began, and the long night work. In addition to the vast amount of collateral reading — there was much more material published on the subject of multiple personality than he had realized — he had each day's film to analyze, notes to make, abstracts to prepare for computer-coding, and then, after prolonged thought, the next day's lessons to outline.

The rest of the clinic refused to stop and wait for this job to be done, and he had an additional weight of conscience as he concealed his impatience with everything else but the Newell case. He was so constituted that such a weight made him over-meticulous in the very things he wished to avoid, so that his ordinary work took more time rather than less.

As for the research, much of it was theory and argumentation; the subject, like reincarnation, seemed to attract zealots of the most positive and verbose varieties, both pro and con. Winnowing through the material, he isolated two papers of extreme interest to him. One was a theory, one an interim report on a series of experiments which had never been completed due to the death of the researcher.

The theory, advanced by one Weisbaden, was based on a search through just such material as this. Indeed, Weisbaden seemed to have been the only man besides himself who had ever asked the Medical Information Service for this complete package.

From it, he had abstracted statistics, weighted them to suit his theory, and come up with the surprising opinion that multiple personality was a twinning phenomenon, and that if a method were found for diagnosing all such cases, a correspondence would be found between the incidence of multiple births and the incidence of multiple personalities. So many births per thousand are twins, so many per hundred thousand are triplets, and the odds with quads and quints are in the millions.

So, too, said Weisbaden, would be the statistical expectation for the multiple personality phenomenon, once such cases stopped being diagnosed as schizoids and other aberrates.

Weisbaden had not been a medical man — he was some sort of actuary — but his inference was fascinating. How many twins and triplets walked the Earth in single bodies, without any organic indication that they were not single entities? How many were getting treatment for conditions they did not have; how many Siamese twins were being penalized because they would not walk like

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other quadrupeds; how many separate entities were being forced to spend their lives in lockstep?

Some day, thought the doctor — as so many doctors have thought before — some day, when we can get closer to the genetic biologists, when psychology becomes a true science, when someone devises a cross-reference system between the disciplines which really works . . . and some day, when I have the time — well, maybe I could test this ingenious guess. But it's only a guess, based on neither observation nor experiment. Intriguing, though — if only it could be tested.

The other paper was of practical value. A certain Julius Marx — again not a medical man, but a design engineer with, apparently, hobbies — had built an electro-encephalograph for two (would anyone ever write a popular song about *that?*) which graphed each of the patients through a series of stimuli, and at the same time drew a third graph, a resultant.

MARX was after a means of determining brain-wave types, rather than individual specimens, and had done circuitry on machines which would handle up to eight people at once. In a footnote, with dry humor, he had qualified his paper for this particular category: *"Perhaps one day the improbable theories of Dr. Prince might approach impossibility through the use of this device upon a case of multiple personality."*

Immediately on reading this, the doctor ordered EEGs on both Anson and Newell, and when he had both before him, he wished fervently that Julius Marx had been there with him; he suspected that the man enjoyed a good laugh, even on himself.

The graphs were as different as such graphs can possibly be.

The confirmation of his diagnosis was spectacular, and he left a note for Miss Jarrell to track down every multiple personality case he had rejected for the past eight years and see what could be done about some further tests. What would come after the tests, he did not know — yet.

The other valuable nudge he got from the Marx paper was the idea of a resultant between two dissimilar electro-encephalograms. He made one from the Newell-Anson EEGs — without the use of anything as Goldbergian as Marx's complicated device, but with a simple computer coupling. He kept it in his top desk drawer, and every few days he would draw it out and he would wonder . . .

Therapy for Anson wasn't therapy. Back at the very beginning, Miss Thomas had said that his was a personality that wouldn't dismantle; she had been quite

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right. You can't get episodic material from an entity which has had no subjective awareness, no experience, which has no name, no sense of identity, no motility, no recall.

There were many parts to that strange radiance of Anson's and they were all in the eye of the beholder, who protected Anson because he was defenseless, who was continually amazed at his unselfconsciousness as if it were an attribute rather than a lack. His discovery of the details of self and surroundings was a never-ending delight to watch, because he himself was delighted and had never known the cruel penalties we impose on expressed delight, nor the masking idioms we use instead: *Not a bad sunset there. Yeah. Real nice.*

"He's good," Miss Jarrell said to the doctor once. "He's only good — nothing else."

Therapy for Newell was, however, therapy, and not rewarding. The properly dismantled and segmented patient is relatively simple to handle.

Key in anger (1200 cycles) and demand "How old are you?" Since anger does not exist unsupported, an episode must emerge; the anger has an object, which existed at a time and place; and there's your episode. "I'm six," says your patient. Key in the "You are six years old" note for reinforcement and you're all ready for significant recall. Or start with the age index: "You are twelve years old." When that is established, demand, "How do you feel?" and if there is significant material in the twelfth year, it will emerge. If it is fear, add the "fear" note and ask "Where are you?" and you'll have the whole story.

BUT not in Newell's case. There was, of course, plenty of conflict material, but somehow the conflicts seemed secondary; they were effects rather than causes. By far the largest category of traumas is the unjustified attack — a severe beating, a disease, a rejection. It is traumatic because, from the patient's point of view, it is unjustified. In Newell's case, there was plenty of suffering, plenty of defeat; yet in every single episode, he had earned it. So he was without guilt. His inner conviction was that his every cruelty was justified.

The doctor had an increasing sense that Newell had lived all his life in a books-balanced, debts-paid condition. His episodes had no continuity, one to the other. It was as if each episode occurred at right angles to the line of his existence; once encountered, it was past, like a mathematical point. The episodes were easy to locate, impossible to relate to one an-

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other and to the final product.

The doctor tried hard to treat Anson and Newell in his mind as discrete, totally unconnected individuals, but Miss Jarrell's sentimental remark kept echoing in his mind: "He's good; he's only good — nothing else," and generating an obverse to apply to Newell: *He's evil, he's only evil — nothing else.*

This infuriated him. How nice, how very nice, he told himself sarcastically, the spirits of good and evil to be joined together to make a whole man, and how tidily everything fits; black is totally black and white is white, and together the twain shall make gray. He found himself telling himself that it wasn't as simple as that, and things did not work out according to moral evaluations which were more arbitrary even than his assigned audio.

It was about this time that he began to doubt the rightness of his decision, the worth of his therapy, the possibility of the results he wanted, and himself. And he had no one to advise him. He told that to Miss Thomas.

It was easy to do and it surprised both of them. He had called her in to arrange a daily EEG on both facets of the Newell case and explain about the resultant, which he also wanted daily. She said yes, Doctor, and very well, Doctor, and right away, Doctor, and a number of other absolutely correct things. But she didn't say why, Doctor? or that's good, Doctor, and suddenly he couldn't stand it.

He said, "Miss Thomas, we've got to bury the hatchet right now. I could be wrong about this case, and if I am, it's going to be bad. Worse than bad. That's not what bothers me," he added quickly, afraid she might interrupt, knowing that this must spill over or never emerge again. "I've been through bad things before and I can handle that part of it."

Then it came out, simple and astonishing to them both: "But I'm all alone with it, Tommie."

HE had never called her that before, not even to himself, and he was overwhelmed with wonderment at where it might have come from.

Miss Thomas said, "No, you're not," gruffly.

"Well, hell," said the doctor, and then got all his control back. He dropped a film cartridge into the viewer and brought out his notes. Using them as index, he sat with his hand on the control, spinining past the more pedestrian material and showing her the highlights. He presented no interpretations while she watched and listened.

She heard Newell snarling, "You better watch what you're

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doing," and Anson pointing about the room, singing, "Floor, flower, book, bed, bubble. Window, wheel, wiggle, wonderful." (He had not known at that stage what a wonderful was, but Miss Jarrell said it almost every hour on the hour.) She saw Newell in recall, aged eleven, face contorted, raging at his fifth-grade teacher, "I'll bomb ya, y'ole bitch!" and at thirteen, coolly pleased at something best unmentioned concerning a kitten and a centrifuge.

She saw Anson standing in the middle of the room, left elbow in right hand, left thumb pressed to the point of his chin, a stance affected by the doctor when in perplexity: "When I know everything there is to know," Anson had said soberly, "there'll be two Doctor Freds."

At this, Miss Thomas grunted and said, "You wouldn't want a higher compliment than that from anybody, anytime." The doctor shushed her, but kindly. The first time he had seen that sequence, it made his eyes sting. It still did. He said nothing.

She saw it all, right up to yesterday's viewing, with Newell in a thousand pieces from what appeared to be a separate jigsaw puzzle for each piece, and Anson a bright wonder, learning to read now, marveling at everything because everything was new—teaspoons and music and mountains, the Solar System and sandwiches and the smell of vanilla.

And as he watched, doors opened in the doctor's mind. They did not open wide, but enough for him to know that they were there and in which walls. How to describe the indescribable *feeling* of expertness?

It is said that a good truck-driver has nerve-endings which extend to the bumper and tail light, tire tread to overhead. The virtuoso pianist does not will each separate spread and crook of each finger; he wills the notes and they appear.

The doctor had steered this course of impossible choices by such willing and such orientation; and again he felt it, the urge that *this* way is right now and *there* is the thing to do next. The miracle to him was not the feeling, but that it had come back to him while he watched the films and heard the tapes with Miss Thomas, who had said nothing, given no evaluation or advice. They were the same films he had studied, run in the same sequence. The difference was only in not being alone any more.

"Where are you going?" Miss Thomas asked him.

From the coat closet, he said, "File that material and lock it up, will you, Miss Thomas? I'll call you as soon as I return." He went to the door and smiled back at

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her. It hurt his face. "Thanks."

Miss Thomas opened her mouth to speak, but did not. She raised her right hand in a sort of salute and turned around to put the files away.

THE doctor called from a booth near the Newell apartment. "Did I wake you, Osa? I'm sorry. Sometimes I don't know how late it gets."

"Who . . . Fred? Is that you, Fred?"

"Are you up to some painful conversation?"

Alarmed, she cried, "Is something the matter? Is Dick—"

He mentally kicked himself for his clumsiness. What other interpretation could she have put on such a remark? "He's okay. I'm sorry. I guess I'm not good at the light banter . . . Can I see you?"

She paused for a long moment. He could hear her breathing. "I'll come out. Where are you?"

He told her.

She said, "There's a café just around the corner, to your left. Give me ten minutes."

He put up the phone and went to the corner. It was on a dingy street which seemed to be in hiding. On the street, the café hid. Inside the café, booths hid. In one of the booths, the doctor sat and was hidden. It was all he could do to keep himself from assuming a fetal posture.

A waiter came. He ordered collinses, made with light rum. He slumped then, with his forearms on the table and his chin on them, and watched bubbles rise in the drinks and collect on the underside of the shaved ice, until the glasses frosted too much for him to see. Then he closed his eyes and attempted to suspend thought, but he heard her footsteps and sprang up.

"Here I am," he said in a seal-like bark far louder than he had intended.

She sat opposite him. "Rum collins," she said, and only then did he remember that it had always been the drink they shared, when they had shared things. He demanded of himself, Now why did I have to do that? and answered, You know perfectly well why.

"Is he really all right?" she asked him.

"Yes, Osa. So far."

"I'm sorry." She turned her glass around, but did not lift it. "I mean maybe you don't want to talk about Dick."

"You're very thoughtful," he said, and wondered why it had never occurred to him to see her just for himself. "But you're wrong. I did want you to talk about him."

"Well . . . if you like, Fred. What, especially?"

He laughed. "I don't know. Isn't that silly?"

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He sipped his drink. He was aware that she did the same. They never used to say "cheers" or "skoal" or anything else, but they always took that first sip together.

He said, "I need something that segmentation or hypnosis or narcosynthesis just won't give me. I need to flesh out a skeleton. No, it's more refined than that. I need tints for a charcoal portrait." He lifted his hands and put them down again. "I don't know what I need. I'll tell you when I get it."

"Well, of course I'll help if I can," she said uncertainly.

"All right. Just talk, then. Try to forget who I am."

HE met her eyes and the question there, and elaborated, "Forget I'm his therapist, Osa. I'm an interested stranger who has never seen him, and you're telling me about him."

"Engineering degree, and where he comes from, and how many sisters?"

"No," he said, "but keep that up. You're bound to stumble across what I want that way."

"Well, he's . . . he's been sick. I think I'd tell a stranger that."

"Good! What do you mean, sick?"

She glanced quickly at him and he could follow the thought behind it: *Why don't you tell* ME *how sick he is?* And then, *But you really want to play this game of the interested stranger. All right.*

She stopped looking at him and said, "Sick. He can't be steered by anything but his own – pressures and they – they aren't the pressures he should have. Not for this world."

"Why do you suppose that is?"

"He just doesn't seem to care. No," she denied forcefully, "I don't mean that, not at all. It's more like – I think he would care if he – if he was allowed to, and he isn't allowed to." She got his eyes again. "This is very hard to do, Fred."

"I know and I'm sorry. But do go on; you're doing fine. What do you mean, he isn't allowed to care about the world and the way it wags? Who won't allow him?"

"It isn't a who; it's a – I don't know. You'd have a term for it. I'd call it a monster on his back, something that drives him to do things, be something he really isn't."

"We strangers don't have any terms for anything," he reminded her gently.

"That's a little refreshing," she said with a wan half-smile. "I like . . . mystified . . . people. They make me feel like one of the crowd. You know who's lucky?" she asked, her voice suddenly wild and strained and, by its tone, changing the subject. "Psychotics are lucky. The nuts, the real buggy ones. (I talk like this to

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layman strangers.) The ones who see butterflies all the time, the ones who think the President is after them."

"Lucky!" he exploded.

"Yes, lucky. They have a name for the beast that's chewing on them. Sometimes they can see it themselves."

"I don't quite —"

"I mean this," she said excitedly. "If I see grizzly bears under every lamp post, I'm *seeing* something. It has a name, a shape; I could draw a picture of it. If I do something irrational, the way some psychos do — run a nonexistent railroad or shoot invisible pheasant with an invisible gun, I'm *doing* something. I can describe it and say how it feels and write letters about it. See, these are all *things* plaguing the insane. Labels, handles. Things that *you* can hold up to reality to demonstrate that they don't coincide with it."

"And that's lucky?"

SHE nodded miserably. "A mere neurotic — Dick, for example — hasn't a *thing* he can name. He acts in ways we call irrational, and has a sense of values nobody can understand, and does things in a way that seems consistent to him but not to anyone else. It's as if there were a grizzly bear, after all, but we'd never heard of grizzly bears — what they are, what they want, how they act. He's driven by some monster without a name, something that no one can see and that even he is not aware of. That's what I mean."

"Ah."

They sat for minutes, silent and careful.

Then, "Osa —"

"Yes, Fred."

"Why do you love him?"

She looked at him. "You really meant it when you said this would be a painful conversation."

"Never mind that. Just tell me."

"I don't think it's a thing you can tell."

"Then try this: What is it you love in him?"

She made a helpless gesture. "Him."

He sat without responding until he knew she felt his dissatisfaction with the answer.

She frowned and then closed her eyes. "I couldn't make you understand, Fred. To understand, you'd have to be two things: a woman, and — Osa." Still he sat silent. Twice she looked up to his face and away, and at last yielded.

She said in a low voice, "It's a . . . tenderness you wouldn't believe, no matter how well you know him. It's a gentle, loving something that no one ever born ever had before and never will again. It's . . . I hate this, Fred!"

"Go on, for heaven's sake! This

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is exactly what I'm looking for."

"It is? Well, then . . . But I hate talking like this to you. It doesn't seem right."

"Go *on!*"

She said, almost in a whisper, "Life is plain hell sometimes. He's gone and I don't know where, and he comes back and it's just awful. Sometimes he acts as if he were alone in the place — he doesn't see me, doesn't answer. Or maybe he'll be the other way, after me every second, teasing and prodding and twisting every word until I don't know what I said or what I should say next, or who I am, or . . . anything, and he won't leave me alone, not to eat or to sleep or to go out. And then he —"

She stopped and the doctor waited, and this time realized that waiting would not be enough. "Don't stop," he said.

She shook her head.

"Please. It's impor —"

"I would, Fred," she burst out frantically. "I'm not refusing to. I *can't,* that's all. The words won't —"

"Don't try to tell me what it is, then," he suggested. "Just say what happens and how it makes you feel. You can do that."

"I suppose so," she said, after considering it.

OSA took a deep breath, almost a sigh, and closed her eyes again.

"It will be hell," she said, "and then I'll look at him and he . . . and he . . . well, it's *there,* that's all. Not a word, not a sign sometimes, but the room is full of it. It's . . . it's something to love, yes, it's that, but nobody can just love something, one-way, forever. So it's a loving thing, too, from him to me. It suddenly arrives and everything else he is doing, the cruelty, the ignoring, whatever might be happening just then, it all stops and there's nothing else but the — whatever it is."

She wet her lips. "It can happen any time; there's never a sign or a warning. It can happen now, and again a minute from now, or not for months. It can last most of a day or flash by like a bird. Sometimes he goes on talking to me while it happens; sometimes what he actually says is just nothing, small-talk. Sometimes he just stands looking at me, without saying anything. Sometimes he — I'm sorry, Fred — he makes love to me then and that's . . . Oh, dear God, that's . . ."

"Here's my handkerchief."

"Thank you. He — does that other times, too, when there's nothing loving about it. This — this thing-to-love, it — it seems to have nothing to do with anything else, no pattern. It happens and it's what I wait for and what I look back on; it's all I have and all I want."

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When he was quite sure she had no more to say, he hazarded, "It's as if some other – some other personality suddenly took over."

He was quite unprepared for her reaction. She literally shouted, "*No!*" and was startled herself.

She recoiled and glanced guiltily around the café. "I don't know why," she said, sounding frightened, "but that was just – just *awful*, what you said. Fred, if you can give any slightest credence to the idea of feminine intuition, you'll get that idea right out of your head. I couldn't begin to tell you why, but it just isn't so. What loves me that way may be part of Dick, but it's Dick, not anybody or anything else. I *know* that's so, that's all. I know it."

Her gaze was so intense that it all but made him wince. He could see her trying and trying to find words, rejecting and trying again.

At last, "The only way I can say it that makes any sense to me is that Dick could be such a – a louse so much of the time and still walk a straight line without something just as extreme in the other direction. It's – it's a great pity for the rest of the world that he only shows that side to me, but there it is."

"Does he show it only to you?" He touched her hand and released it. "I'm sorry, but I must ask that."

She smiled and a kind of pride shone from her face. "Only to me. I suppose that's intuition again, but it's as certain as Sunday." The pride disappeared and was replaced by a patient agony. "I don't delude myself, Fred—he has other women; plenty of them. But that particular something is for me. It isn't something I wonder about. I just – know."

He sat back wearily.

SHE asked, "Is all this what you wanted?"

He gave her a quick, hurt glance and saw, to his horror, her eyes filling with tears.

"It's what I asked for," he said in a flat voice.

"I see the difference." She used his handkerchief. "May I have this?"

"You can have –" But he stopped himself. "Sure." He got up. "No," he said, and took the damp handkerchief out of her hand. "I'll have something better for you."

"Fred," she said, distressed, "I –"

"I'm going, forgive me and all that," he said, far more angrily than he had thought he would. But polite talk and farewells were much more than he could stand. "The layman stranger has to have a long interview with a professional acquaintance. I don't think I'd better see you again, Osa."

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"All right, Fred," she said to his back.

He had hurt her, he knew, but he knew also that his stature in her cosmos could overshadow the hurt and a hundred more like it. He luxuriated in the privilege and stamped out, throwing a bill to the waiter on the way.

He drove back and plodded up the ramp to the clinic. For some obscure reason, the inscription over the door caught his attention. He had passed it hundreds of times without a glance; he had ordered it put there and he was satisfied with it, and why should it matter now? But it did. What was it that Newell had said about it? *Some saw about the sanctity of personality*. A very perceptive remark, thought the doctor, considering that Newell hadn't read it:

ONLY MAN CAN FATHOM MAN

It was from Robert Lindner and was the doctor's answer to the inevitable charges of "push-button therapy." But he wondered now if the word "Man" was really inclusive enough.

He shook off the conjecture and let himself into the building.

Light gleamed from the translucent door of his office at the far end of the corridor. He walked down the slick flooring toward it, listening to his heels and not thinking otherwise, his mind as purposively relaxed as a fighter's body between rounds. He opened the door.

"What are you doing?"

"Waiting," said Miss Thomas.

"Why?"

"Just in case."

WITHOUT answering, he went to the closet and hung up his coat. Back at his desk, he sat down and straightened his tired spine until it crackled. Then he looked at Miss Thomas in the big chair. She put her feet under her and he understood that she was ready to leave if he wished her to.

He said, "Hypothesis: Newell and Anson are discrete personalities."

While he spoke, he noticed Miss Thomas's feet move outward a little and then cross at the ankles. His inner thought was, Of all the things I like about this woman, the best is the amount of conversation I have with her without talking.

"And we have plenty of data to back that up," he continued. "The EEGs alone prove it. Anson is Anson and Newell is Newell, and to prove it, we've crystallized them for anyone to see. We've done such a job on them that we know exactly what Anson is like without Newell. We've built him up that way, with that in mind. We haven't done quite the same

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with Newell, but we might as well have. I mean we've investigated Newell as if Anson did not exist within him. What it amounts to is this: In order to demonstrate a specimen of multiple personality, we've separated and isolated the components.

"Then we go into a flat spin because neither segment looks like a real human being . . . Miss Thomas?"

"Yes?"

"Do you mind the way I keep on saying 'we'?"

She smiled and shook her head. "Not at the moment."

"Further," he said, answering her smile but relentlessly pursuing his summation, "we've taken our two personalities and treated each like a potentially salvable patient—one neurotic, one retarded. We've operated under the assumption that each contained his own disorder and could be treated by separate therapies."

"We've been wrong?"

"*I* certainly have," said the doctor. He slapped the file cabinet at his left. "In here, there's a very interesting paper by one Weisbaden, who theorizes that multiple personalities are actually twins, identical twins born of the same egg-cell and developing within one body. One step, as it were, into the microcosm from *foetus in foetu*."

"I've read about that," said Miss Thomas. "One twin born enclosed in the body of another."

"But not just partly—altogether enclosed. Whether or not Weisbaden's right, it's worth using as a test hypothesis. That's what I've been doing, among other things, and I've had my nose stuck so far into it that I wasn't able to see a very important corresponding part of the analogy: namely, that twinning itself is an anomaly, and any deviation in a sibling of multiple origin is teratological."

"My," said Miss Thomas in mock admiration.

THE doctor smiled. "I should have said 'monstrous,' but why drag in superstitions? This thing is bad enough already. Anyway, if we're to carry our twinning idea as an analogy, we have got to include the very likely possibility that our multiple personalities are as abnormal as Siamese twins or any other monstrosity—I *hate* to use that word!"

"I'm not horrified," said Miss Thomas. "Abnormal in what way?"

"Well, in the crudest possible terms, what would you say was the abnormality suffered by one Siamese twin?"

"The other Siamese twin."

"Mmm. And by the same analogy, what's the name of Newell's disorder?"

"My goodness!" gasped Miss

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Thomas. "We better not tell Hildy Jarrell."

"That isn't the only thing we'll have to keep from her—for a while, at least," said the doctor. "Listen: did you run my notes on Newell?"

"All of them."

"You remember the remark she made that bothered me, about Anson's being only and altogether good, and the trouble I had with the implication that Newell was only and altogether bad?"

"I remember it."

"It's a piece of childishness that annoys me wherever I find it and I was damned annoyed to be thinking at all along those lines. The one reason for its being in the notes at all is that I had to decant it somewhere. Well, I've been euchred, Miss Thomas. Because Anson appeared in our midst shining and unsullied, I've leaned over backward trying to keep away from him the corruptions of anger, fear, greed, concupiscence and all the other hobbies of real mankind. By the same token, it never occurred to me to analyze what kindness, generosity, sympathy or empathy might be lurking in Newell. Why bother in such a—what was the term you used?"

"Heel," said Miss Thomas without hesitation.

"Heel. So what we have to do first is to give each of these—uh—people the privilege of entirety. If they are monsters, then let us at least permit them to be whole monsters."

"You don't mean you'll—"

"We," he corrected, smiling.

She said, through her answering smile, "You don't mean we'll take poor Anson and—"

He nodded.

"Offhand, I don't see how you're going to do it, Doctor. Anson has no fear. He'd laugh as he walked into a lion's cage or a high-tension line. And I can't imagine how you'd make him angry. You of all people. He—he loves you. As for . . . oh, dear. This is awful."

"Extremes are awful," he agreed. "We'll have to get pretty basic, but we can do it. Hence, I suggest Miss Jarrell be sent to Kalamazoo for a new stove or some such."

"And then what?"

"It is standard practice to acquaint a patient with the name and nature of his disorder. In our field, we don't tell him, we show him, and when he absorbs the information, we call it an insight. Anson, meet Newell. Newell, meet Anson."

"I do hope they'll be friends," said Miss Thomas unhappily.

IN a darkness within a darkness in the dark, Anson slept his new kind of sleep, wherein he now had dreams. And then there was

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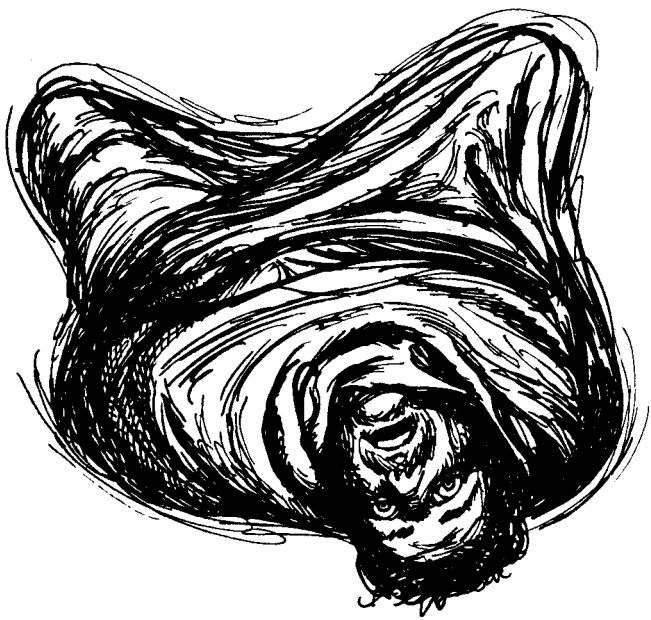

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his own music, the deep sound which lit the darkness and pierced the dark envelopes, one within the other; and now he could emerge to the light and laughter and the heady mysteries of life and communication with Miss Hildy and Doctor Fred, and the wonder on wonder of perception. Gladly he flung himself back to life to—

But this wasn't the same. He was here, in the bed, but it wasn't the same at all. There was no rim of light around the ceiling, no bars of gold pouring in a sunlit window; this was the same, but not the same—it was dark. He blinked his eyes so hard, he made little colored lights, but they were inside his eyes and did not count.

THERE was noise, unheard-of, unbearable noise in the form of a cymbal-crash right by his head in the dark. He recoiled from it and tried to bounce up and run, and found he could not move. His arms were bound to his sides, his legs to the bed, by some wide formless something which held him trapped. He fought against it, crying, and then the bed dropped away underneath him and stopped with a crash, and rose and dropped again. There was another noise—not a noise, though it struck at him like one: this was a photo-flash, though he could not know it.

Blinded and sick, he lay in terror, waiting for terror again.

He heard a voice say softly, "Turn down the gain," and his music, his note, the pervasive background to all his consciousness, began to weaken. He strained toward it and it receded from him. Thumpings and shufflings from somewhere in the dark threatened to hide it away from him altogether. He felt, without words, that the note was his life and that he was losing it. For the first time in his conscious life, he became consciously afraid of dying.

He screamed, and screamed again, and then there was a blackness blacker than the dark and it all ceased.

"He's fainted. Lights, please. Turn off that note. Give him 550 and we'll see if he can sleep normally. God, I hope we didn't go too far."

They stood watching the patient. They were panting with tension.

"Help me with this," said the doctor. Together, he and Miss Thomas unbuckled the restraining sheet. They cleared away the flash-gun, the cymbals, and readjusted the bed-raising control to its normal slow operation.

"He's all right, physically anyway," said the doctor after a swift examination. "I told you it would work if we got basic enough. He

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wouldn't fear a lion because he doesn't know what a lion is. But restraint and sudden noise and falling – he doesn't have to know what they are. Okay, button him up again."

"What? You're not going to –"

"Come on, button him up," he said brusquely.

She frowned, but she helped him replace the restraining sheet. "I still think–" she began, and earned a "Sh!"

HE set up the 200-cycle note again at its usual amplitude and they waited. There was a lag in apparent consciousness this time. The doctor realized that the patient was awake, but apparently afraid to open his eyes.

"Anson . . ."

Anson began to cry weakly.

"What's the matter, Anson?"

"D-doctor Fred, Doctor Fred... the big noise, and then I couldn't move and all the black and white smash lights." He wept again.

The doctor said nothing. He simply waited. Anson's sobs stopped abruptly and he tried to move. He gasped loudly and tried again.

"Doctor Fred!" he cried in panic.

Still the doctor said nothing.

Anson rolled his head wildly, fell back, tried again. "Make it so I can get up," Anson called piteously.

"No," said the doctor flatly.

"Make so I –"

"No."

Piercingly, Anson shrieked. He surged upward so powerfully that for a second the doctor was afraid for the fastenings on the restraining sheet. But they held.

For nearly ten minutes, Anson fought the sheet, screaming and drooling. Fright turned to fury, and fury to an intense, witless battle. It was a childish tantrum magnified by the strength and staying power of an adult.

At about the second minute, the doctor keyed in a supplementary frequency, a shrill 10,500 cycles which had been blank on the index. Whenever Anson paused for breath, the doctor intoned, "You are angry. You are angry." Grimly he watched until, a matter of seconds before the patient had to break, he released him to sleep.

"I couldn't stand another minute of that," said Miss Thomas. Her lips were almost gray. She moistened a towel and gently bathed the sleeping face. "I didn't like that at all."

"You'll like the rest of it," promised the doctor. "Let's get rid of this sheet."

They took it off and stored it.

"How'd you like me to hit the ten-five cycles with that sheet off?" he asked.

"Build him a cage first," she

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breathed in an awed tone.

He grinned suddenly. "Hit eighty cycles for me, will you?"

SHE did and they watched Richard Newell wakening. He groaned and moved his head gingerly. He sat up suddenly and yelped, and covered his face for a moment with both hands.

"Hello, Newell. How do you feel?"

"Fred! What've you been *doing* to me?"

"How do you feel?"

"Like the output of a garbage disposal unit. I haven't felt like this since the day I rowed a boat for fourteen hours."

"It's all right, Newell. All in a day's work."

"Work is right. I know – you've had me out pulling a plow while I was hypnotized. Slave labor. Lowers the overhead. Damn it, Fred, I'm not going to take much more of this."

"You'll take as much as I choose to give you," snapped the doctor. "This is my party now, Dicky-boy."

Miss Thomas gasped. Newell slowly swung his legs out and sat looking at the doctor, an ominous and ugly half-smile on his face.

"Miss Thomas," said the doctor, "ten-five, please."

With his amusement deeply concealed, he watched Miss Thomas sidle to the controls and dial for the 10,500 supplementary note. He knew exactly what was going on in her mind. Ten-five was a fury motif, the command to Anson to relive the state of unbearable anger he had been in just moments ago.

"Miss Thomas," said Newell silkily, "did I ever tell you the story of my life? Or, for that matter, the story of the doctor's life?"

"Why – no, Mr. Newell."

"Once upon a time," said Newell, "there was a doctor who . . . who . . ." As the shrill note added itself to the bumble of the 80-cycle tone, Newell's voice faltered. Behind him, the doctor heard the rustle of Miss Thomas's starch as she braced herself.

Newell looked at the doctor with astonishment. "What the hell am I up to?" he murmured. "That isn't a funny story. 'Scuse me, Miss Thomas." He visibly relaxed, swung his feet back up on the bed and rested on one elbow. "I haven't felt like this since . . . Where's Osa?" he asked.

"Home. Waiting for you."

"God. Hope she doesn't have to wait much longer. Is she all right?"

"She's fine. So are you, pretty near. I think we have the thing whipped. Like to hear about it?"

"'Talk about me,'" Newell quoted. "'Talk nice if you can, but talk about me.'"

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THE doctor saw Miss Thomas staring incredulously at the controls, checking to be sure she had keyed the right note. He laughed. Newell laughed with him; it was one of the most pleasant of imaginable sounds. And it wasn't Anson's laugh, either — not even remotely. This was Richard Newell to the life, but warm, responsive, considerate.

The doctor said, "Did Osa ever tell you she thought you had a nameless monster pushing you around?"

"Only a couple hundred times."

"Well, you have. I'm not joking, Dick — you really have. Only you've never suspected it and you don't have a name to call it by."

"I don't get you." He was curious, anxious to learn, to like and be liked. It was in the way he spoke, moved, listened. Miss Thomas stood with her hand frozen near the controls, ready to shut him off at the first sign of expected violence.

"You will. Now here's the picture." And in simple terms, the doctor told him the story of Anson, the theory of multiple personality as a phenomenon of twinning, and at last his theory of the acrobatic stabilization the two entities had achieved on their own.

"Why acrobatic?" asked Newell.

"You know you act like a heel most of the time, Dick."

"You might say so." It was said quite without resentment.

"Here's why. (Just listen, now; you can test it any way you like after you've heard it all.) Your alter ego (to coin a phrase) had been walled in, excluded from consciousness and expression and even self-awareness, ever since you were born. I won't attempt to explain that; I don't know. Anyway, there it lay, isolated but alive, Dick, alive — *and just as strong as you!*"

"I . . . can't picture such a thing."

"It isn't easy. I can't either, completely. It's like trying to get into the mind of another species, or a plant, if you can imagine such a thing. I do know, though, that the thing is alive, and up until recently had nothing — no knowledge, no retained experience, no mode of expression at all."

"How do you know it's there, then?"

"It's there all right," said the doctor. "And right this very minute, it's blowing its top. You see, all your life it's lived with you. It has had a blind, constant urge to break through, and it never could make it until it popped up here and we drew it out. It's a fascinating entity, Dick. I won't go into that now; you'll know it — him—thoroughly before you leave. But believe it or not, it's pretty nice. More than nice: it's posi-

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tively angelic. It's lain there in the dark all these years like a germinated seed, pushing up toward the light. And every time it came near — you batted it down again."

"I did?"

"For good sound survival reasons, you did. But like a lot of survival impulses, yours was pretty irrational. A lion roars, a deer runs. Good survival. But if he runs over a cliff? What I'm getting at is that there's room for both of you in Richard Anson Newell. You've coexisted fairly well, considering, as strangers and sometime enemies. You're going to do a lot better as friends and partners. Brothers, if you want the true term, because that's just what the two of you are."

"How does this — if true — explain the way I've been mucking around with my life?"

LOOKING for an image, the doctor paused. "You might say you've been *cantilevered* out from a common center. Way out. Now your alter — we call him Anson — is, as I've said, a very nice fellow. His blind strugglings have been almost all toward something — call it an aura, if you like — in people around you. The pressures are everything that's warm and lovable and good to be with.

"But you — man, you felt invaded! You could never reach out toward anything; Anson was there ahead of you, pressing and groping. You had to react, immediately and with all your might, *in the opposite direction.* Isn't it true that all your life you've rejected and tramped on anything that attracted you — and at the same time you've taken only things you couldn't really care about?"

"Well, I . . ."

"Just hold onto the idea. This speech I'm making is for your intellectual understanding; I don't expect you to buy it first crack out of the barrel."

"But I haven't always . . . I mean what about Osa? Are you telling me I didn't really want Osa?"

"That's the cantilever effect, Dick. Anson never felt about Osa the way you did. I think she must have some confining effect on him; he doesn't like to be confined, does he, Miss Thomas?" He chuckled. "She either leaves him cold or makes him angry. So angry that it's beyond belief. But it's an infant's anger, Dick — blind and furious and extreme. And what happens *then,* when you react in the *opposite* direction?"

"Oh, my God," breathed Newell. "Osa . . ." He turned his suddenly illuminated gaze up. "You know, sometimes I — we — it's like a big light that . . ."

"I know, I know," said the doctor testily. "Matter of fact, that's happening right now. Turn off the

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ten-five, please, Miss Thomas."

"Yes, Doctor."

"That high note," the doctor explained. "It's for Anson – induced anger. You're being pretty decent at the moment, Newell. You realize that?"

"Well, why wouldn't I? You've done a lot for me."

The note faded. Newell closed his eyes and opened them again. There was a long, tense silence.

Finally Newell said in his most softly insulting tone, "You spin a pretty tale, Freddy-boy. But I'm tired of listening. Shall I blackmail you the hell out of here?"

"Five-fifty, Miss Thomas."

"Yes, Doctor." She turned Newell off.

BACK in the office again, Miss Thomas jittered in indecision. She tried to speak and then looked at the doctor with mute pleading.

"Go ahead," he encouraged.

She shook her head. "I don't know what comes next. Morton Prince was wrong; there are no multiple egos, just multiple siblings sharing the same body, the same brain." She halted, waiting for him to take it from there.

"Well?" he said.

"I know you're not going to sacrifice one for the other; that's why you never handled these cases before. But – " she flapped her hands helplessly – "even if Newell could carry the equipment around, I'd never sleep nights, thinking that Anson had to go through the agony of that ten-five note just so Newell would be a decent human being. Or even, for that matter, vice versa."

"It wouldn't be either humane or practical," he said. "Well?"

"Do they take turns being dominant, one day on, one day off?"

"That still would be sacrificing each half the time."

"Then what? You said it would be 'Newell, meet Anson. Anson, meet Newell.' But you don't have the same problem you'd have with Siamese twins or the same solution."

"Which is?"

"Separating them without killing either one. All these two have is a single brain to share and a single body. If you could cut them free – "

"I can't," he said bluntly. "I don't intend to."

"All right," she conceded in defeat. "You're the doctor. You tell me."

"Just what you said – the Morton Prince cases were in communication."

"And Newell and Anson are, just because we gave Anson a vocabulary? What about that cantilever effect you explained to Newell? You can't let them go through life counterbalancing each other – Newell pulling violently to the other side of Anson's reactions,

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Anson doing the same with Newell's. Then *what?"* she repeated almost angrily. "If you know, why put me through this guessing game?"

"To see if you'd come up with the same answer," he said candidly. "A check on my judgment. Do you mind?"

She shook her head again, but this time with a little complimentary smile. "It's a painful way to get cooperation, only it works, damn you." She frowned then, considering. "The two of them are compartmented. Are they different in that way from the other multiples?"

"Some, yes — the ones that are detected because there is communication. But not the others. And those cases rate treatment (because all people in difficulty do) and Newell-Anson, if we work it out properly, will show us how to help them. There's an obvious answer, Miss Thomas. I'm hoping — almost desperately — that you come up with the one I thought of."

SHE made a self-impatient gesture. "*Not* the psychostat. *Definitely* not eliminating one or the other. *Not* making them take turns." She looked up with a questioning awe on her face. "The *opposite* of treating Siamese twins?"

"Like what?" he asked urgently, leaning forward.

"Don't separate them. *Join* them. Make a juncture."

"Keep going," he pressed. "Don't stop now."

"Surgical?"

"Can't be done. It isn't one lobe for Newell, the other for Anson, or anything that simple. What else?"

She thought deeply, began several times to say something, dismissed each intended suggestion with a curt head-shake. He waited with equally deep intensity.

She nodded at last. "Modulate them separately." She was no longer asking. "Then modulate them in relation to each other so they won't be in that awful cantilever balancing act."

"Say it!" he nearly yelled.

"But that isn't enough."

"No!"

"Audio response."

"Why?" he rapped out. "And which?"

"Sixty cycles — the AC tone they'll be hearing almost all the time. Assign it to communication between them."

The doctor slumped into a chair, drained of tension. He nodded at her, with the tiredest grin she had ever seen.

"All of it," he whispered. "You got everything I thought of . . . including the 60 cycles. I knew I was right. Now I *know* it. Or doesn't that make sense?"

"Of course it does."

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"Then let's get started."

"Now?" she asked, astonished. "You're too tired—"

"Am I?" He jacked himself out of the chair. "Try stopping me and see."

THEY used the EEG resultants, made two analogs and another, and used all three as the optimum standard for the final fixing process in the psychostat. It was a longer, more meticulous process than it had ever been and it worked; and what shook the doctor's hand that last day was an unbelievable blend—all of Newell's smoothness and a new strength, the sum of powers he had previously exhausted in the dual struggle that neither had known of; and, with it, Anson's bright fascination with the very act of drawing breath, seeing colors, finding wonderment in everything.

"We're nice guys," said Richard Anson Newell, still shaking the doctor's hand. "We'll get along great."

"I don't doubt it a bit," the doctor said. "Give my best to Osa. Tell her . . . here's something a little better than a wet handkerchief."

"Whatever you say," said Richard Anson Newell.

He waved to Miss Thomas, who watched from the corridor, and behind her, Hildy Jarrell, who wept, and he went down the steps to the street.

"We're making a mistake, Doctor," said Miss Thomas, "letting him—them—go."

"Why?" he asked, curious.

"All that brain power packed in one skull . . ."

The doctor wanted to laugh. He didn't. "You'd think so, wouldn't you?" he agreed.

"Meaning it's not so at all," she said suspiciously. "Why not?"

"Because it isn't *twice* the amount of brains any individual has. It's only as much as any *two* distinct individuals have. Like you and me, for instance. Mostly we supplement each other—but just here and there, not everywhere, adding up to a giant double brain. Same with Newell and Anson. And any two people can be counted on to jam one another occasionally. So will they—but not like before treatment."

They watched until Richard Anson Newell was out of sight, then went back to check the multiple personality cases that Miss Jarrell had dug out of the files.

FOUR months later, the doctor got a letter:

Dear Fred,

I'll write this because it will do me good to get it off my chest. If it doesn't do enough good, I'll send it. If that doesn't help, I don't know what I'll do. Yes, I do. Nothing.

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Dick is . . . incredible. He takes care of me, Fred, in ways I'd never dreamed of or hoped for. He cares. That's it, he cares — about me, about his work. He learns new things all the time and loves old things over again. It's . . . could I say miracle?

But, Fred — this is hateful of me, I know — the thing I told you about, the thing I used to wish for and live to remember, no matter what . . . it's gone. That's probably good, because of what happened between times.

But sometimes I'd trade my perfect husband for that louse and a wet handkerchief, if I could have the other thing along with it somehow.

There, I've said it.

Osa

The doctor galloped through the clinic until he found his head technician in the electrical lab.

"Tommie," he said jovially, "did you ever go out and get drunk with a doctor?"

The tears were streaming down his face. Miss Thomas went out and got drunk with the doctor.

—THEODORE STURGEON

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Nothing but the best

By ALAN COGAN

Illustrated by CAL

If he took the high road—and also the low road—he'd be in the same place afore himself!

CHARLES MEAD stood on top of Hobson's Hill and stared at the town below, as though trying to imprint a permanent impression of the view on his memory. He paid particular attention to a wood-and-corrugated-iron construction at the bottom of the hill by the railroad tracks, which bore the sign, FINLAY'S LUMBER CO.

Well concealed in the bushes behind him and humming mutely were four black metal boxes forming a small square. Anten-

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nae sprouted from each box, curving inward to form an arch in which the light seemed to vibrate and shimmer. Charles Mead made an adjustment on one of the boxes and then stepped quickly into the shimmering arch.

Darkness smothered him immediately. There was a sudden terrifying sensation of weightlessness, of falling. He kept pushing and pushing, although there seemed to be nothing to push against except swirling, spinning blackness.

Then, suddenly, he was standing on another Hobson's Hill.

The four black boxes had gone, but the blurred arch of light was still there. He fell to his knees, clutching in terror at the grass, trembling and breathless: the switch from one world to another was always unnerving. Immediately between worlds, the sensation of being in *no* world, of stepping into a bottomless abyss, always left him ragged with panic. He had not made the trip many times before, but he doubted if he would ever get used to it.

THE town looked substantially the same as the one he had just left, though he was pleased to note that Finlay's Lumber Co. was no longer in sight. It was proof that he had made the switch successfully. For some reason, Finlay never seemed to have established his business anywhere but in Charles Mead's world. There were similar changes in every world — some large changes, some small — but at least Hobson's Hill was always there, which was why he chose it as his jumping-off point.

Charles Mead set off down the hill and along the highway into town. In a telephone booth, he searched the directory and then began walking again with a new eagerness in his step.

Ten minutes later, he turned onto the front porch of a small, neat brick bungalow. He was about to press the bell button when he paused, listening. From inside the house, he heard voices yelling — a man and a woman — strident with anger.

Charles Mead smiled faintly and rather smugly and put his finger to the button. The voices stopped yelling as the bell jangled somewhere in the house. A moment later, the front door opened and, at the same time, he heard a woman's high heels stamping through to the back of the house. Then a door slammed.

The man in the doorway wore moccasins, jeans and a red plaid shirt. Except for the general sloppiness of his dress compared with the unwrinkled neatness of Charles Mead's expensive gray

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slacks and sports jacket, the pair could have been twins. Both were slim and tall with the slightly stooped appearance of tall men. Their short, sandy hair and wide blue eyes gave them both a boyish look.

"Chuck Mead?" Charles Mead asked. This one was sure to be called Chuck, he thought.

The man nodded, frowning slightly.

"Good," said Charles. "That's my name, too. May I come in?"

He pushed his way past the bewildered Chuck Mead, went into the living room and sat down.

HE BEGAN the speech he had prepared. It was the first time he had said it aloud to anyone and, as he talked, he became painfully aware of how foolish it sounded. He knew that Chuck Mead was smiling behind the hand he so casually cupped over his chin and mouth. In the tiny living room with its fading furnishings, its old mahogany piano and the new TV, its old wedding pictures on the newly redecorated walls, talk of other worlds than this was hopelessly out of place.

"Look, I'm wasting my time trying to explain," Charles Mead said. "I want you to come with me. Don't ask questions. What I have to show you will save hours of explanation."

"What are you going to show me?" Chuck asked.

"Just come with me," Charles persisted. He knew it was only a matter of time. The bewildering similarity between them had definitely aroused the other's curiosity. He noticed that although Chuck Mead still smiled, it was an uneasy smile.

"Okay," Chuck said. "Anything for a laugh. Where do we go?"

"Hobson's Hill. I suppose you call it that in this world, too?"

"That's what we call it," Chuck said, suppressing another grin. "In this world."

"Let's go, then," Charles urged, relieved that the toughest part was over. "There's nothing to worry about — you'll be completely safe."

"Who's worrying?" challenged his counterpart pugnaciously.

CHARLES pulled Chuck Mead, fighting and struggling all the way, into his own world and together they stood on Hobson's Hill, overlooking the town. "Scares me silly every time I make that crossing," Charles confessed breathlessly.

Chuck's fingers still clutched his arm, digging painfully into the flesh as though he expected the ground to crumble away at any moment.

"You're okay now," Charles reassured him. He pressed the

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switches on the square of black boxes and the humming noise ceased. The arch collapsed. "Just look around you and see if this isn't a different world. You'll notice we have a Finlay's Lumber Company here, which you don't have in your world. That's only one minor difference. Come on home with me and I'll give you all the proof you could want."

Charles Mead's home was a spacious villa set well back from the road in pleasant handsomely kept grounds. They went inside and Charles led the way upstairs to the den, a bright, paneled room at the back of the house.

"Nice place," Chuck said, awed.

"I suppose it is," Charles agreed. "Sit down. We've got a lot to talk about."

He poured drinks from a well-stocked cabinet and settled in an easy chair. "Now, then, I want to know if you're really convinced of this business of other worlds."

"Sure," Chuck said, "unless you've got me doped or hypnotized or I'm dreaming or something. It all *seems* real enough."

"It *is* real." Ice cubes clicked as Charles tilted his glass and drank. "Now let's get down to business. Just listen to what I have to say and don't interrupt. I want you to think for a moment about those times in your life when you've had to make a decision or choose between two alternative courses of action which would affect your whole life. Have you ever wondered, when you've made your choice, what would have happened if you had chosen the other alternative? For instance, if you arrived at a situation where two jobs were available and you chose one, wouldn't you sometimes wonder how things would have been if you had chosen the other job?

"I think I can show you," he continued, "that when we reach such situations and finally select a course of action, *we also take the other course at the same time.* I'm going to try to prove to you that an alternative world somehow comes into existence in which you live your other life. As a matter of fact, you and I sprang from one of these decisive moments. I'm pretty sure I know which one, too."

HE CUT short his guest's protests with a quick wave of his hand. "You really can't argue with me about it. You've seen *two* worlds already — surely you don't think it ends there? After all, we live in an infinite universe; why shouldn't we be infinite creatures living out the infinite possibilities of our lives? Still, to return to you and me— your wife's name is Kathy, isn't it?"

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"Yeah. Is yours?"

"My wife is called Estelle. Does that mean anything to you?"

Chuck put down his drink and straightened suddenly. "You mean Estelle Defoe?"

"That's right. If you want to make sure we're talking about the same girl, go look out the window."

Chuck stood up and leaned over the sill. Outside, surrounded by the close-trimmed green lawn, was a swimming pool. Beside the pool, a shapely blonde was stretched out face down on a red towel like some bright, beautiful calendar girl. She wore the bottom half of a green striped bikini; the top half lay on the grass beside her.

"My God! That's Estelle, all right!" Chuck exclaimed. "I'd know her anywhere. Still got that terrific figure, too!"

"I suppose she is hard to forget after—how long? Just over seven years, isn't it? Isn't that how long you've been married?"

"How did you know?"

"Can't you guess? Remember, seven or eight years ago, how you tortured yourself choosing between two girls — Estelle or Kathy? Remember how hard it was arriving at a decision?"

"It wasn't too difficult. I chose Kathy."

"I know," Charles said, smiling. "I was left with Estelle. Or perhaps it was the other way round. Don't you see: *I am you and you are me!* If there's any difference between us, it's only what the last seven years have done to us. It was one of those decisions I spoke of, when one of us followed one path, leaving the other to explore the other path."

"That's crazy! I happen to know Estelle married a major in the Army years ago and went out West to live."

"In your world, maybe," Charles said, "but the one in this world married me."

CHUCK looked enviously out of the window. "Lucky you." He made a gesture that took in the room, the girl, the magnificent house, the beautiful garden. "Did Estelle make you rich, too?"

"Not the way you seem to be figuring. Her father gave me a job in his electronics business and I did some profitable research for him. Now I'm a partner in the firm. We have a big plant on the other side of town. As a matter of fact, it was while I was in the lab out there that I stumbled on these alternate worlds. By sheer accident, I crossed into another world and almost scared myself to death.

"By the way," he went on, "what happened to you after you

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married Kathy? I often wondered what it would have been like being married to her."

"It's all right, I guess," Chuck said. "We got married and bought a house. A couple of years ago, I went into business on my own —Hi-Fi and TV repairs. Business isn't too bad." He flashed another look at the golden girl sunning herself by the pool. "Estelle hasn't changed much in all these years," he said nostalgically. "She's still as beautiful as ever."

Then he banged his glass down hard on the window sill. "You must be trying to put something over on me! What's the gag?"

"There's no gag," Charles assured him. "Besides, there's more to come."

"Like what?"

"I mentioned earlier about this being an infinite universe. There *must* be more than just the world you live in and the world I live in. Think it over — millions of everybody making decisions all the time, following one path and discarding another — there must be millions of worlds! An infinite number of them!"

Chuck drained his glass and went back to the cabinet to help himself.

"It's not just a theory," Charles insisted. "I *know* there's more than just our two worlds. I've seen a couple of them. I could even take you to them. And every time anyone makes a decision, new ones spring into existence. Do you follow me?"

"I guess so," Chuck said. "As much as anyone can follow a thing like that."

"I'm still not finished—"

"Hold it," Chuck cut in abruptly. "Before we get tangled up any further, what am *I* doing here?"

"I HAD to tell someone," Charles said. "I couldn't keep a thing like this to myself, yet who could I tell? I thought it over and said nothing to anyone in this world, because it suddenly occurred to me that the best person to confide in was one of my hundreds of selves."

"Quit it," Chuck begged. "You'll drive me nuts — you and your hundreds of selves!"

"You're one of them," Charles reminded him. "The others all exist somewhere. I just happened to reach *you* by accident. When I started down Hobson's Hill, I didn't know which Charles Mead would be in the town. After all, I've made dozens of big decisions in the past few years. There must be plenty of other Charles Meads in existence."

"That still doesn't explain why you brought *me* here. Don't tell me you intend to round up all the different versions of yourself. If so, count me out!"

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"You're getting warm," Charles said. "If you'll bear with me a little longer, I'll stretch your imagination again."

Chuck groaned and settled down resignedly in the armchair.

"If there really are all these worlds," Charles began, "and I can't see why there shouldn't be, then a world must exist where there's a Charles Mead who never made a wrong decision! A Charles Mead who did everything right, who never made a wrong move in his life! Of course there must also be one of us who never made a *right* decision—to say nothing of all the endless varieties between the two extreme cases. But, of course, I'm not concerned with them."

Chuck stood watching the sleeping girl by the ornamental pool, looking back, thinking back over seven years. Then he went over to the cabinet and poured himself another drink—a strong one. "So what if there is a perfect Charles Mead somewhere? What about him?"

"I'd like to see him," Charles said. "I'd like to see such a world. Wouldn't you?"

"In your place? Not a chance! What's wrong with the world you're in now? It looks good to me. A lot better than mine — beautiful wife, big house, big shot in the company . . ."

"It's a matter of what you're used to," Charles said dryly. "I hope you don't mind me saying this — we are brothers, more rather than less—when I called on you, I'm sure I heard you fighting with Kathy. Do you fight often?"

"I guess we do," Chuck said, "from time to time."

"Estelle and I fight all the time. I still regret marrying her, even though I got rich because of it. Anyway, we don't get along. We don't even try to manage. There were plenty of times when I regretted not marrying Kathy. She seemed to me to be a nice homy, comfortable sort of kid."

"I hope you're not going to suggest we trade places," Chuck said.

"Of course not. I told you—I'm searching for the *perfect* world. Charles Mead's Utopia!" He raised his glass in a mock toast. "Want to come along?"

CHUCK MEAD was silent, looking out of the window on to the lawn. The girl by the pool stirred briefly in her sunny slumber. "Weren't you ever happy with Estelle?" he asked.

Charles shrugged. "I suppose I was at first. But we soon grew tired of each other. I was tied up with the business and Estelle wanted a good time."

"It's funny," Chuck said wistfully, "but when Kathy and I

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started to drift apart, I began to have Estelle on my mind all the time. I used to imagine how much better things would have been if I'd married her instead."

"I guess we both made a poor choice. Probably the perfect Charles Mead didn't choose either girl."

"If *I* failed with Kathy and *you* failed with Estelle, I wouldn't be surprised if the Charles Mead who—ah—got away didn't fail in some other world. Kathy and Estelle were a couple of nice kids. Maybe it wasn't their fault entirely. Maybe it was the fault of Charles and Chuck Mead."

"Possibly," said Charles a little wearily. "But that sort of argument gets us nowhere. You still can't disprove that there isn't a perfect Charles Mead somewhere."

"I doubt if he's perfect," Chuck said. "Making the correct decisions all the time doesn't necessarily make him perfect. Besides, even if you did meet him, it wouldn't alter *you* in any way. You'd be the same person you are now."

"I'd still like to find him."

"I'll bet you wouldn't know him if you saw him. And you might waste a whole lifetime looking. Then, if you did find him, what makes you think he'd want *you* hanging around?"

"At least, if he did kick me out, I'd know he'd made the absolutely correct decision," Charles said, smiling.

"Well, don't count me in on your search. If you take my advice, you'll smash your invention or whatever it is and stay in your own world. There's nothing to be gained by exploring the paths you *might* have followed."

"What's to be gained by not going?"

"That's up to you. You can stay and make the best of your own world."

"You're a fine one to talk. Are you going back to your own life —to Kathy? Even though you don't get along with her?"

NODDING emphatically, Chuck said, "Of course. Your Utopia is as remote to me as Heaven or Hell. The important thing is not the hundreds of lives you could have led or all the possibilities that occur in your lifetime. The thing that counts is what you do with the one lifetime that's given to you. You're not happy with Estelle so you blame Estelle, thinking you'd be happier with Kathy or someone else. I felt the same way about Kathy and thought I'd be happier with Estelle. Now that you've given us both the opportunity to see ourselves ruining *both* lives, we can see that it's probably us at fault. If you want

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to find the perfect Charles Mead, you have to find him inside yourself — not in some untouchable otherworld."

"You should have been a minister," Charles told him. "You preach a good sermon."

Chuck's boyish face reddened suddenly. "It still goes, anyway. Perhaps I've spent more time than you lately wondering why my marriage was breaking up. Maybe I have the answer now."

"So you're going back to the little woman, filled with love and kisses and a heart full of hope!"

"Forget it," Chuck said. "Forget I said anything at all."

"Don't worry about it. No hard feelings. You're perfectly free to do or say what you like." He suddenly smiled and then began to laugh aloud.

"What's funny?" Chuck asked.

"Plenty," said Charles. "I just realized we both made decisions a few minutes ago. We both chose between two alternatives. You decided to go home to Kathy instead of going with me. I decided to go on with my quest instead of going back to Estelle."

"What about it?"

"Remember what I told you? Every time you choose one of two alternative courses of action, *another world comes into existence in which you follow the other course of action*! Don't you see what that means?"

CHARLES MEAD said goodby to Chuck as they stood on top of Hobson's Hill. Then, when Chuck had vanished, he switched off his equipment and set about camouflaging the black boxes in the bushes. It was too late in the day to make a second attempt at crossing into another world and he decided to wait until tomorrow. When a man was seeking perfection, he told himself, it paid to be patient and cautious and not to rush headlong into things.

Presently, when he was satisfied with his work of concealing the apparatus, he set off down the hill.

* * *

Chuck Mead came through the harrowing experience of crossing worlds and stood once more on the top of Hobson's Hill in his own world. He glanced all around him, nervously reassuring himself that he *was* in his own world again. Then he took a crumpled cigarette from his shirt pocket and inhaled hungrily while he waited for his heart to stop its frantic hammering.

Had he really been in another world, he wondered, and had he really seen Estelle? Presently, as he recalled events, his train of thought brought him around to Kathy and his decision. She would still be mad at him after the fight they had had when

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Charles arrived. Funny, now he couldn't even remember what they had been quarreling about! It seemed that any little thing could start them off these days.

But it wasn't too late—he was sure of that now. The situation could still be repaired. There was still time.

With a quick, determined gesture, he flung the cigarette away from him, and with a new spring in his stride, he set off down the hill.

SOMEWHERE in the infinite universe, among the myriad worlds and possibilities, was a world born of a decision. In this world, Charles Mead stood on top of Hobson's Hill dismantling his apparatus. He was finished with it and was going to destroy it as soon as he got home. Chuck had been right; he was a fool to think of leaving Estelle for a mad dream.

Strange, he thought, the way he had neglected her all these years. A girl like Estelle needed warmth and gayety and affection, not the boorish neglect of an idiot who wished he was in another world. He was lucky, he realized, that she was still there to go home to.

With the act of making his decision, he felt a new peace of mind he had not experienced in years. At least he was about to tackle a problem within his grasp, not some ridiculous and impossible hunt through an infinity of alien worlds.

He shook his head, genuinely puzzled. How on Earth could he have ever considered such an absurd notion, he wondered as he shouldered his equipment and set off down the hill.

IN YET another world, also born of a decision, Charles and Chuck Mead emerged on top of Hobson's Hill. They looked about them eagerly, pointing out the landmarks in the town below.

"This one's *really* different!" Charles said excitedly. "Look, there's no lumberyard and not even any railroad tracks. And that tall gray building downtown is new, too!"

"Let's go," Chuck urged. "Let's take a look."

"Take it easy," Charles cautioned, his hand on Chuck's arm. "We'll have to be careful about this. Remember, we're looking for the best — the perfect — world!"

"Okay," Chuck said. "Even if it takes a lifetime, we settle for nothing but the best."

And together, like two wise men off to seek Truth itself and, at the same time, like two schoolboys on some youthful adventure, they set off down the hill.

—ALAN COGAN

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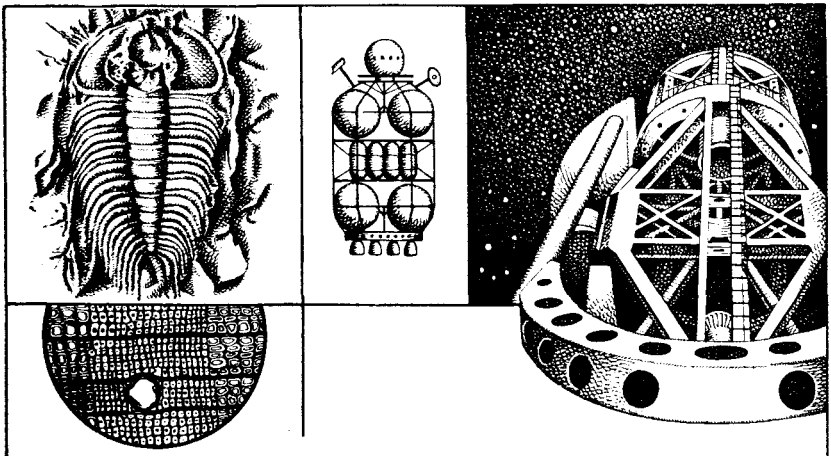

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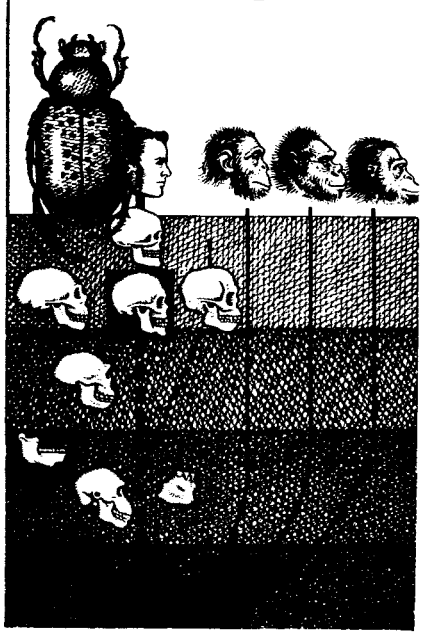

PROJECT VANGUARD

AGAIN this is a column which is written entirely in response to letters received from readers—a fairly high percentage of the mail during the last few months has been asking about Project Vanguard, the official name for the satellite shots. Why, several correspondents wanted to know, why has GALAXY, of all magazines, been so silent on Vanguard?

Well, there are several inter-

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twined answers to this query. To begin with, I explained various possible methods of shooting a satellite, in GALAXY, just a short time prior to the official announcement that the United States would shoot a satellite during the International Geophysical Year of 1957-58. When the announcement was made — the date was July 29, 1955 — there was nothing new that could be added for a considerable while.

Some of the letters I received reminded me of a press conference I attended, where a newspaperman said to a government scientist involved in Vanguard: "You boys have changed your story around several times; why don't you stick to one line?" Whereupon the scientist answered truthfully that nobody had changed a story around, but that the facts were released as the scientists made up their minds what to do.

Incidentally I still don't know just what that newspaperman meant when he accused the scientists, or the public relations officers, of having "changed the story around." Each release merely added more facts. He must have considered it a case of malicious duplicity that the first release spoke about *a* satellite, while later releases upped the figure to ten. Now the figure has been raised to twelve and sixteen units are on order, presumably to allow for possible failures.

BEFORE telling what has been decided upon, it might be wise to mention the fundamental facts briefly. A body will become a satellite of Earth if it has a certain and rather high velocity, parallel to the ground, outside the atmosphere. Which velocity is required depends on the distance from the ground, but for those heights now within reach, say from 200 to 800 miles, the required velocities are all quite close to 4½ miles per second. Let's assume the body needs 16,000 miles per hour to stay in its orbit. To impart such a velocity on something with the use of present-day fuels requires a three-stage rocket.

The problem of producing a permanent satellite may therefore be described as consisting of two successive steps. The first one would be to lift the artificial satellite beyond the atmosphere, about to a height of 200 miles. The second would be to provide it with velocity parallel to the ground.

In reality, these two steps are not so strictly separated. The lifting itself could and would provide some of the velocity needed.

If every one of the three rockets which make up the three-stage rocket were to fire just as soon as the preceding stage has

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used up its fuel, it could easily happen that the burn-out point of the third stage is still in the atmosphere. Now the orbit begins at the burn-out point of the final stage of the assembly. This means that the artificial satellite, each time it has completed one revolution around the Earth, would go through that burn-out point.

Since the Earth has meanwhile turned on its axis, that point would be somewhere else with reference to the ground.

But this is another problem. The important fact here is that the satellite would have to go through the altitude of the burn-out point of the final, third stage. If that burn-out point were at a height of 80 miles, the satellite, each time it comes around, would dip into the atmosphere to an Earth-nearest point, the perigee, only 80 miles up. Each time it does that, air resistance would kill off some of its momentum. Hence it would not be a permanent satellite, but a temporary one.

A few satellite shots will certainly be made with the perigee of the orbit inside the atmosphere, just because measuring the changes in the orbit which occur as a result of the grazing of the atmosphere would give us figures for atmospheric density at such great heights.

But if you want a permanent satellite, a burn-out point in the atmosphere will not do. You want the final burn-out point to be located outside the atmosphere. And this can be done by taking advantage of the well-known fact that a rocket does not stop moving just because its fuel supply has been used up.

After the period of "powered flight," there comes the period of "unpowered flight" for every rocket. And if, at the moment of burn-out, the trajectory pointed upward, as is usually the case, the gain in altitude *after* burn-out is considerable. In the nearly vertical high-altitude shots of the V-2 program, the burn-out altitude of the rocket was always quite close to 20 miles. The peak altitudes reached were from 85 to 114 miles.

The three-stage Vanguard satellite carrier will lift vertically at first. After it has gained an altitude of two or three miles, it will be tilted in an easterly direction. This tilt eastward will take advantage of the fact that the Earth turns in an easterly direction, so that the rocket receives a kind of free velocity gift.

The firing site for Vanguard is going to be Patrick Air Force Base, near Cape Canaveral in Florida. The rotational velocity of the Air Force Base being around 1300 feet per second, the rocket gains this 1300 feet per second by moving eastward after takeoff.

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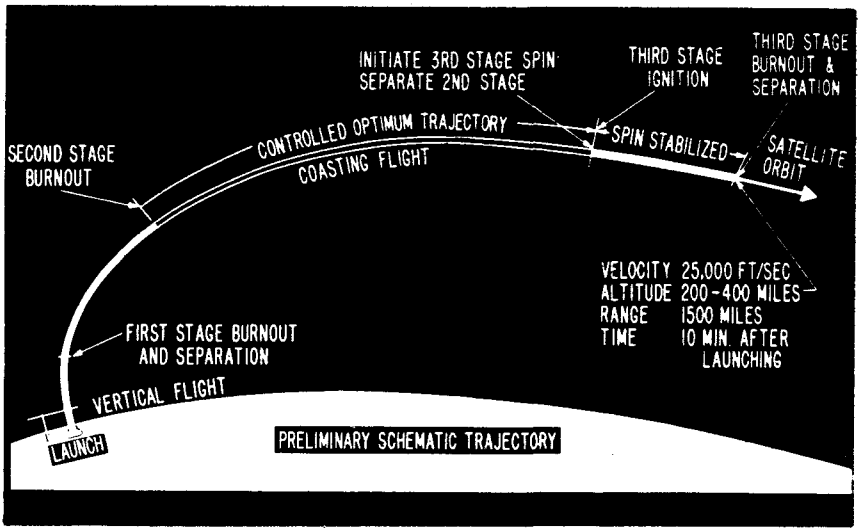

The official schematic drawing of the satellite shots. The term "range 1500 miles" on the diagram refers to the expected impact point of the second stage, about 1500 miles from the takeoff site.

(If one insisted that it should move westward, it would need extra fuel to kill off these 1300 feet per second, obviously an illogical procedure.)

When the first stage stops burning, the whole will be about 36 miles above sea level and, measured horizontally, about 25 miles to the east of the firing site. At this moment, the second stage ignites and lifts itself out of the first stage. The first stage will go through a normal ballistic trajectory, which will carry it to a maximum height of roughly 65 miles above sea level. This highest point of its trajectory will be about 120 miles from the takeoff site, measured horizontally. The first stage will find its end by smashing into the Atlantic Ocean 230 miles from the takeoff site.

Meanwhile, the second stage has used up its fuel and acquired a velocity that is roughly half of the necessary orbital velocity. At the moment of burn-out, it will be 140 miles above sea level and at least that far from the firing site, measured horizontally. Now it coasts upward at a very shallow angle. It may to all intents and purposes be beyond the atmos-

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phere at 140 miles altitude, but it is safe to make sure.

The second stage will be permitted to coast without power to an altitude beyond 200 miles. In fact, it will probably reach around 300 miles. While gaining altitude as it coasts along, it unfortunately loses velocity. The loss due to whatever air resistance there might still be left will probably be so small that it could not even be measured, but the rocket is coasting upward against the gravitational attraction of the Earth. And that is a loss that can be calculated and is noticeable.

When the second stage has coasted to the highest altitude it can attain, it must of necessity be moving parallel to the ground. It is now at the halfway point of its trajectory. From now on, it will lose altitude and gain speed again, following the gravitational attraction of the Earth. At the point where it is highest, moving parallel to the ground — and incidentally moving at its slowest, which is still pretty fast — the third-stage rocket will separate from the second stage.

The horizontal distance from the launching site at that moment is 700 miles. The height is right. The direction of movement is right, too. All that is still lacking is velocity. It is up to the third stage to make up the difference between what it has and what is required. Nobody can tell precisely at the moment just how much that will be, but the third stage will probably have to supply half of the total velocity.

A PERIGEE of 300 miles is either outside the atmosphere or still inside, depending on whose figures you are willing to accept. If we take the highest figures available, a satellite with a perigee 300 miles up will last a year. Taking the lowest figures, it will be permanent, at least as compared to the human life-span. Its actual lifetime will probably be somewhat in between — after all, this is one of the things we want to find out.

So much for the performance of the satellite carrier. Now for its appearance and dimensions.

The overall appearance of the Vanguard three-stage rocket will be precisely that of an enormous rifle cartridge — no fins. Fins are not needed because the rocket motors of the first two stages will be mounted on gymbals, just as were the motors of the Viking rockets. Balancing during the first few seconds following takeoff and tilting thereafter will be accomplished by deflecting the exhaust blast slightly, as needed.

At takeoff, the satellite carrier will be 72 feet tall, with a largest diameter of 45 inches. It will be an exceptionally long and slim

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rocket. The total takeoff weight will be around eleven tons, which is less than the takeoff weight of the V-2. The first stage will be guided and controlled, but the guidance and control instruments will all be located in the second stage. One may say that the first stage is essentially a booster of large dimensions, the device to supply the first heavy push. The fine work is all done by the second stage.

The second stage operates on other fuels than the first, the main reason being that the liquid oxygen used in the first stage is not really storable. Once you have fueled a rocket operating on liquid oxygen, it is time to fire it. Therefore the two upper stages of Vanguard must have storable fuels. That of the second stage is unsymmetrical dimethyl-hydrazine, burning with nitric acid which acts as the oxidizer. The fuel of the third stage will be a solid fuel, precise composition not yet decided on.

As has been mentioned, it is the second stage which does all the fine work. It controls the first stage and later it controls itself. And because it puts itself in the proper position and fires the third stage at the proper moment, it may be said to control the third stage, too. Technically, the third stage is an unguided rocket, just something that is aimed (by the second stage) and fired at the right moment.

THE third stage and the artificial satellite on top of the third stage will be completely encased by the nose cone of the second stage. After second-stage burn-out, this nose cone will split open and be shed, exposing the third stage and the satellite. They had to be protected against air friction on the way up, but after reaching 140 miles, they do not need protection any more. The third stage is supposed to spin around its longitudinal axis for stability. This spin must be induced by a mechanism in the second stage and it might be this spin which is used to get rid of the protecting nose cone of the second stage.

Nothing much is yet known about the third stage, except for the fact that it will be a solid-fuel rocket to simplify firing procedure. Nor can much be said about the satellite itself, except that there will be various satellites. The one most talked about will be spherical, of the same diameter as the third-stage rocket — expected to be 20 inches — and contain instruments which report their findings to the ground by means of a battery-powered radio transmitter. It might be necessary to separate this satellite from the third-stage rocket. This could be

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done most simply by mounting it on a tensed spring which is released by a timing device.

If such separation of satellite and third-stage carrier is necessary and is carried out, we'll get two satellites for the price of one. The third-stage rocket is in the same orbit as the satellite. It is only a few feet per second slower than the satellite (which got a slight additional push from the tensed spring) and it has no reason to fall back to Earth.

Satellite and third-stage rocket will move along the same orbit, drawing apart very slowly, and will afford a fine comparison of the behavior of two satellites in the same orbit, but of different shapes. The latter only matters, of course, as far as residual air resistance is concerned.

If no separation is needed, the satellite proper would simply be the nose cone of the third-stage rocket. It is quite possible that a specialized satellite would be essentially attached to the third stage, with a few sensing elements sticking out from it.

Still another possible form of artificial satellite that has been discussed in the past would be uninstrumented and large. One could fill up the whole nose cone of the third stage with a compressed plastic foam that is permitted to escape to form a large foam bubble around the third stage. Or it could be a non-elastic plastic balloon which is inflated from a pressure capsule carried along.

This latter type of artificial satellite would have a very fine visibility. It would not report to the ground by means of radio, but it would reveal very many things we want to know because of the shape of the orbit it will assume. And in order to observe this well, the satellite must be easily visible.

I may add that it is planned to inform the public via the newspapers and radio when the artificial satellites will be visible for a certain area. They will be naked-eye objects, faint stars that can be told from the real stars because of their visible movement. But, of course, these faint moving stars will only be the vanguard of much bigger ones to come.

THE YEAR ON MARS

IN the January issue this year, I answered a question from a reader concerning a calendar for Mars. Not only the reader whose question I answered — or thought I did — but half a dozen others have written in in the meantime, telling me that I had not been explicit enough. A few of them had tried to construct Martian calendars on the basis of my reply, but found they did not have enough information to go by.

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Since Mars is near right now, interest in the construction of a calendar for Mars for the convenience of future explorers might be more widespread than at other times and I'll therefore go into the subject at greater length and with more detail. The two natural units on which any calendar is based are the length of the day, which is the time needed by the planet to turn around its axis, and the length of the year, the time needed by the same planet to move once around the Sun.

Mars needs 687 days to go around the Sun once, but these are Earth days. The Martian day is 37 minutes and about 23 seconds longer than the Earth day; hence there are 668.59905 Mars days in a Martian year. For the sake of convenience, let's round this off to 668 6/10th days; we can take care of the tiny difference later. Using that figure, we find that five Mars years contain 3343 Martian days. Since for purposes of calendar making, every year has to have a number of full days — you cannot end a year with half a day and three-tenths of a day — the five years comprising such a five-year cycle must be of unequal length.

Breaking up the five-year cycle is naturally an arbitrary procedure which could follow any one of several different schemes. Three possibilities are these:

First Year	669	days
Second Year	669	"
Third Year	669	"
Fourth Year	669	"
Fifth Year	667	"
	3343	days

Or:

First Year	668	days
Second Year	668	"
Third Year	668	"
Fourth Year	668	"
Fifth Year	671	"
	3343	days

Or:

First Year	668	days
Second Year	669	"
Third Year	668	"
Fourth Year	669	"
Fifth Year	669	"
	3343	days

In short, you can either have four years of equal length, with the fifth year two days shorter or three days longer than the others; or else you can alternate with each fifth year one day longer than it would come out if alternation were carried through.

ANOTHER and in some of spects better way would be to follow a ten-year cycle with alternating years. During such a ten-year cycle of 6686 Martian days, the five "short" years of 668 days each would have accumu-

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lated 3340 days and the five "long" years of 669 days each would have accumulated 3345 days, totaling 6685 days. This is one day short, so every tenth year would have to have one additional leap year's day to make the cycle come out even.

So far, so good, but how do we divide the years into months?

Using the ten-year cycle, Dr. Robert G. Aitken, former director of the Lick Observatory, devised a calendar in which each year had sixteen months of six weeks each.

In an odd-numbered year, the four months of spring would all begin on a Sunday and the first

SPRING							
	S	M	T	W	T	F	S
First Week	1	2	3	4	5	6	7
Sec'd Week	8	9	10	11	12	13	14
Third Week	15	16	17	18	19	20	21
Fourth Week	22	23	24	25	26	27	28
Fifth Week	29	30	31	32	33	34	35
Sixth Week	36	37	38	39	40	41	42

SUMMER							
	S	M	T	W	T	F	S
	-	-	-	-	-	-	1
First Week	2	3	4	5	6	7	8
Sec'd Week	9	10	11	12	13	14	15
Third Week	16	17	18	19	20	21	22
Fourth Week	23	24	25	26	27	28	29
Fifth Week	30	31	32	33	34	35	36
Sixth Week	37	38	39	40	41	42	-

AUTUMN							
	S	M	T	W	T	F	S
	-	-	-	-	-	1	2
First Week	3	4	5	6	7	8	9
Sec'd Week	10	11	12	13	14	15	16
Third Week	17	18	19	20	21	22	23
Fourth Week	24	25	26	27	28	29	30
Fifth Week	31	32	33	34	35	36	37
Sixth Week	38	39	40	41	42	-	-

WINTER							
	S	M	T	W	T	F	S
	-	-	-	-	1	2	3
First Week	4	5	6	7	8	9	10
Sec'd Week	11	12	13	14	15	16	17
Third Week	18	19	20	21	22	23	24
Fourth Week	25	26	27	28	29	30	31
Fifth Week	32	33	34	35	36	37	38
Sixth Week	39	40	41	42	-	-	-

Scheme for a Martian calendar for a "short" year as devised by Dr. Robert G. Aitken

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three of these four months would have 42 days each, but the fourth spring month only 41 days. Consequently the four summer months would all begin with a Saturday; the first three of them would have 42 days each and the fourth summer month again only 41 days. Therefore the four autumn months would all begin on Fridays, again with the fourth month having only 41 days, so that the four winter months would all begin on Thursdays. Since again the fourth winter month is only 41 days long, the whole year has used up 668 days.

The next year, logically, has to be an even-numbered year beginning on a Wednesday. Again the four spring months all start on the same weekday, and since the fourth spring month is 41 days long, the four summer months all begin on Tuesdays, running through the schedule of 42, 42, 42 and 41 days. This makes the four autumn months begin on Mondays and the four winter months on Sundays. But in an even-numbered year, *all four* winter months are 42 days long, so that the next odd-numbered year also begins on a Sunday, as did the preceding odd-numbered year.

This scheme can run with utmost rigidity for nine years, but the tenth year must have an extra day to complete the cycle. This extra day will be outside the scheme and not be assigned to any week or month. It will be, in name as well as in spirit, a Holiday.

The more recent calendar for Mars, devised by Dr. I. M. Levitt, director of the Fels Planetarium in Philadelphia, is based on a five-year cycle with a sequence of 668, 669, 669, 668, 669 days. It has twelve months, like the terrestrial calendar, but with eight weeks to the month. A "short" year of 668 days would look as shown in Table II.

As can be seen, at the end of each season there would have to be one "short week" of only six days. The absence of one day per season would have to be disregarded in assigning weekday names. By doing that, every week throughout the whole year (and of course every month, too) would begin with a Sunday. In the "long" years, the month of December would have 56 days, so that a "long" year would have only three "short" weeks instead of four.

This takes care of everything except the small difference caused by rounding off the Martian year to 668.6 Martian days. That simplification causes every calendar year in both these calendars to be 0.00095 days too long, which builds up to very nearly a full day in a thousand years. The adjustment would consist in making

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JANUARY APRIL JULY OCTOBER							FEBRUARY MAY AUGUST NOVEMBER							MARCH JUNE SEPTEMBER DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31	32	33	34	35	29	30	31	32	33	34	35	29	30	31	32	33	34	35
36	37	38	39	40	41	42	36	37	38	39	40	41	42	36	37	38	39	40	41	42
43	44	45	46	47	48	49	43	44	45	46	47	48	49	43	44	45	46	47	48	49
50	51	52	53	54	55	56	50	51	52	53	54	55	56	50	51	52	53	54	55	–

Scheme for a Martian calendar for a "short" year according to Dr. I. M. Levitt

what would normally be a "long" year into a "short" year every millennium.

Dropping one day every millennium is certainly an easy, uncomplicated method of adjustment, but the fact is that this adjusts the calendar a bit too much. After a mere twenty thousand years, the error will have added up to a full day, so the adjustment consisting of changing a "long" year into a "short" year must be omitted every twentieth millennium.

Well, this ought to be detailed enough for the making of a Martian calendar. The difference between terrestrial and Martian day, by the way, is within the adjustment spread of a better-class watch or alarm clock. If you want to, you can have a "Martian clock" just by adjusting one to be 37 minutes and 23 seconds "late" according to Earth time. Once you have accomplished this, and don't forget to keep it wound, the time shown by the hands will make no sense whatever after only a week. However, it will be correct Martian time, for some place on Mars.

— WILLY LEY

★ ★ ★ ★ ★

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VERBAL

ON HIS way downtown in the subway, Humphrey read the letter through for the twentieth time.

Dear Mr. Spink,
If still available, report to this office 10:00 hours T.M.T. tomorrow re employment.
Yours truly,
Theodore Crump
Managing Director
Cosmic Developments, Inc.

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AGREEMENT

By ARTHUR SELLINGS

Some problem to give an unsuccessful poet —what would the Vernans want one-half so precious as the skins they wouldn't sell?

And for the twentieth time since he had received the letter in that morning's mail, Humphrey felt a tangle of emotions.

Foremost, because it was triggered like a reflex, was pain. It was borne on the memory of his first contact with Cosmic Developments, Inc., six months before.

Then he had suffered for three days and nights at the hands of a diabolical creature called Clapton — Clapperton? — who had taken that time to assess his adaptability quotient.

At least that was what he had called it. But Humphrey had soon found out that the phrase was a

Illustrated by DICK FRANCIS

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euphemism for sadism. It had involved his picking his way on hands and knees through complicated mazes, being suddenly dumped into rooms where the perspectives were all wrong, being made to perform such simple-looking feats as threading a needle and drinking a coke – but under gravities ranging from nil to seven. Then there had been those goggles which had been locked on him and which reversed his vision. And that ultraviolet room where–

He brought himself up with a start, conscious that a man in the seat opposite was looking at him curiously. Humphrey stared the fellow down. After all, who wouldn't show his emotions at the memory of that experience? He'd had double vision for weeks afterward and even now had a tendency to walk in circles if he didn't watch out.

And all for what? he had asked himself when he got their letter of rejection. They had said they would keep his application on file. He'd taken that for what it was usually worth. But now – well, one thing was sure. If they thought he was going to let himself be put through all that again, they had another think coming. There were limits to what a self-respecting human being would put up with in his efforts to reach other worlds.

Ah, but that was it!

FOR that was another of the emotions that the letter fanned to ignition point – his desperation to get out. But not for the usual reasons. Most of them wanted – what? – profit, adventure, escape, he supposed.

He smiled now at the memory of Crump asking him what his reasons were. He'd said the money. Useless to have stated the real one – images. Crump would have thought him mad.

But that was the sober truth of it. Being a poet in the 22nd century had its special problems. Not the age-old one of scanty reward – he got by, anyway, nosing out old and rare books – but the sheer brute fact that there had been so many poets already that there was precious little left to say.

Oh, new ideas, new gadgets came out daily, but it took years for them to be assimilated to the point where a poet could introduce them naturally into his work. Humphrey still smarted from the mauling one of his pieces had received from a hostile critic because he'd described his relations with a girl friend in terms of operating a cyberscope. For that matter, he'd suffered a pretty severe mauling from the girl friend, too, before she'd turned on one prismatic heel and marched out of his life.

That had been the clinching

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point. There was only one thing to do – get out where the new horizons were being unrolled, where new experiences and new colors would quicken his jaded soul. It had to be a job; the tourist trade was strictly for millionaires. But months of trying had got him nowhere – until this morning.

He savored that 10:00 hours T.M.T.– Terran Mean Time. The soberly printed symbols woke visions of men who used such phrases as casually as he'd say "a quarter after three," of the worlds in which they moved. He felt a tingling in his blood, felt the images crowding all ready to be liberated.

A MODISHLY moss-cut blonde showed him into Crump's presence. But his attention was jerked to somebody else, distributed awkwardly over a chair by Crump's desk – a tall, bony individual with thick old-fashioned glasses.

Suppressing a shudder, Humphrey marched straight up to Crump's desk. "Let's get one thing straight before we start – I'm having nothing to do with him."

"Ah, yes," said the plump little executive, gesturing Humphrey to a chair. "You remember Dr. Clapperton?"

"Could I forget?" Humphrey all but snarled.

"Well," said Crump reassuringly, "Dr. Clapperton is only here this time on – ah – a watching brief. Now you're ready to start immediately?"

"Just give me twelve hours to settle things up," said Humphrey, relieved. "This is an extraterrestrial job, of course, like the last one I lost out on?"

Crump seemed to hesitate slightly. "This is the same job you applied for."

"Oh? But those tests last time. I thought –"

"Figures," Crump said contemptuously. He picked up a folder and consulted it. "You had an A.Q. of 35.5, the lowest of the fifteen applicants we tested."

Humphrey looked puzzled.

"We've already tried two men," Crump went on. "One with an A.Q. of 98.5, another with 97." Seeing that Humphrey still looked bewildered, he added, with a passing glare at Clapperton, "After a week, both of them were signaling home to be relieved."

"I see," said Humphrey, which wasn't quite true. "Adaptability isn't the important thing for this job, then?"

Crump sighed painfully. "I don't know. What I do know is that Clapperton here wheedled an allocation of a hundred thousand credits out of me for all that A.Q. testing paraphernalia. He is here now to witness what I think of his system."

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"I still say I'm right," Clapperton protested. "An organism in a strange environment either has to adapt, get out or —"

"Go under," Crump finished for him in a weary tone. "I know it by heart by now."

"Well, it's true."

"Then your system of assessment must be haywire, because it hasn't worked for Verna."

"Just what is wrong with — er — Verna?" Humphrey put in.

"Right," said Crump. "Briefly, the natives' disinterest in selling us certain skins that we'd like to buy."

"You mean you can't offer enough?"

"I mean that we have yet to find what the Vernans will take in payment."

"Money, perhaps?" Humphrey suggested brightly.

CRUMP gave him a sad look. "We did think of that. But it's no use to them. They don't appreciate metals, gems, trade balances. Verna is way out and right off the usual routes. There's no terran settlement or tourist trade, so it's understandable that our money isn't of much interest to them. But they don't seem to want anything else that we can offer, either. At least" — he looked at Humphrey peculiarly — "so far as we've been able to find out."

"But how's that? I'd like to be a bit clearer on conditions there, if you don't mind."

"It is a precept of Dr. Clapperton," Crump answered, "to leave the subject with an entirely open mind. That's one idea of his that I do go along with. The two men he selected started from scratch, too."

Humphrey felt suddenly annoyed. "If that's the only reason, I think you—"

"Ah, but that isn't the only reason. Clapperton's idea seems fair enough. You will adapt better if the environment is completely new. To tell you more might lead you to preconceive lines of adaptation that wouldn't work in practice. It might be harder to scrap them than to start clear."

Humphrey nodded, reluctantly seeing the logic of that.

"The pay will be a thousand a month," Crump said, "plus expenses, plus a lump sum of fifty thousand if you can land a contract with the Vernans, with fifteen per cent commission on the Earth selling price of all grath skins you ship."

Grath skins, thought Humphrey, *must be horribly hard to get.* He was about to agree when it occurred to him that he could demonstrate his powers of adaptation right here and now.

"I want seventy-five thousand and twenty per cent."

"Done," said Crump, with sus-

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picious alacrity. "I'll have the contract drawn up right away."

AFTER a couple of days in intertransit, Humphrey's somewhat romantic view of the men who plied the stellar distances had suffered a space-change. The crew of the freighter that was carrying him to Verna were the most taciturn bunch he'd ever met. His pleasantly phrased questions about their jobs got terse grunts.

It was because their jobs were all routine, the captain answered Humphrey's plaint at dinner, a matter of constantly checking the automatic gear that really ran the ship. They were the type the shipping companies chose, the self-sufficient kind who suffered boredom best.

That brief speech seemed to strain the captain's verbal powers severely. Captains were evidently chosen on the same principle.

After that, Humphrey kept to his cabin most of the time, reading from cover to cover and back again the two anthologies that a stringent baggage allowance had limited him to. The pack that CDI had supplied had taken up nearly all the allowance.

The pack consisted of a bulky illustrated catalogue of Earth goods, a six-month ration of food capsules and a squat black Fritsch Field transmitter. A brochure came with that. It seemed that Smith III, the nearest terran station to Verna, would direct an interbeam his way once a week, which was about as often as the black box would be able to get up enough power to generate a ten-minute interference signal.

He had been told to cram up on Intercode. At the end of message, the operator on Smith III would acknowledge receipt by collapsing the beam, which would, in the stiff language of the brochure, "register with an audible oscillation."

Humphrey had been somewhat taken aback at finding that communication would be that rudimentary. Knowing, as everybody did, that intertransit covered light-years in days, he had assumed that the mere exchange of messages would be easy and certainly telephonic. And two-way, at least. It was, he was told, between established stations, but that took considerably more tonnage of equipment and power than he could man or manage.

He had accepted that in a good pioneering spirit — even if it did mean that a call for help would have to await the next weekly beam. But he still brooded on Crump's refusal to tell him more about Verna. He hated not knowing what he might have to call for help from.

But he finished the flight in

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good heart, sustained by the conviction that he was getting somewhere at last.

THE ship materialized out of interspace and dropped him on Verna, the single planet of a Sol-type sun. The captain wished him a laconic good luck. The crew looked up a moment from their tasks.

The freighter took off again. Humphrey was alone on a strange planet for the first time in his life.

He looked about him. He was standing in a sun-baked stretch of country. Trees were dotted about the place. Over to his left and beyond a rise of yellow ground, he could see the tops of the white buildings that he had glimpsed through the clouds as the ship had descended.

Everything was peaceful, the day pleasantly warm. The trees, the sky, the smell of the air even, were comfortingly Earthlike. Nobody – no *thing* – seemed to have started out to meet him.

He shrugged, hoisted the pack which, under what seemed slightly less than Earth gravity, was still heavy enough, and set off toward the signs of life.

As he surmounted the rise, he came into full view of what he saw now was a sizable city. The buildings were no primitive leantos, either; some of them were several stories high. But there was still no sign of any committee, welcoming or otherwise.

Only as he was almost under the shadow of the outer ring of buildings did he get his first sight of a Vernan – and then of eight or nine at once. And very small ones. They came out, scampering, toward him, laughing shrilly.

One of Humphrey's fears vanished. At least he wouldn't have to adapt to the idea of talking business with a fire-breathing dragon. These kids were just like kids anywhere, even if their hair was a bright saffron in color. He waved to them cheerfully.

But just then an adult Vernan, a woman, came out and shouted at them. The children stopped, hesitated, then trooped reluctantly back.

It wasn't until the city had swallowed them up again that Humphrey realized something. *The woman hadn't shouted at all.* That could mean only one thing – the Vernans were telepathic. Well, that ought to take care of the language problem.

He entered the city, his confidence boosted.

INSIDE the close outer ring of houses, the place opened up into broad thoroughfares. He saw lots of Vernans now. They all had that saffron hair. They were dressed in short pastel-colored togas that showed a good deal of

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tawny skin and some handsome physiques.

But nobody seemed to be taking any notice of him, except in the negative sense that not one of them came near him. As he passed up the middle of a wide avenue, the native population retreated or skirted what would have been the sidewalks, if not for the fact that they didn't have sidewalks here. This tied in with the realization that he couldn't see any sign of mechanical transport. Or hear any. The whole place was eerily silent. Then he realized that that would be only natural in a city of telepaths.

But this shunning of him wasn't natural. He came to a sudden halt, resting his pack and feeling the absurdity of the situation. How could any race be so incurious?

And then he was aware of a subtle feeling in the air, a feeling of withdrawal, of polite annoyance at being intruded on, and recognized that he was feeling the cumulative emotions of several thousand Vernans. But why should they regard him as an intruder? He meant them no harm. Anyway, what harm would he be able to do them?

It must have been his predecessors, he thought disgustedly. They'd put on the Big White Chief act, getting the natives' backs up right away. Well, he'd soon show them that wasn't typical of all Earthmen. And if they avoided him, he'd just have to go to a place that he would have sought out in any case – a hotel. They must have some such place here. They'd have to take notice of him then, surely. He didn't know how he'd get over the problem of payment, but he'd work that one out when he came to it.

He shouldered his pack again and set off. He passed places with boards over them like medieval shop signs. One showed a pot, another what was obviously some item of grocery. But hotels seemed few and far between.

But at last he came to a sign with a jug and what looked like a Venetian blind but could conceivably have been a folding bed. At any rate, it looked like the equivalent of bed and breakfast. He went in.

He knew immediately he was in the right place. Potted plants stood around the foyer. The foyer was deserted. But there was a desk and an alert-looking desk clerk.

HUMPHREY strode up to him, determinedly radiating friendliness. At least, he hoped he was projecting. He evidently succeeded, for the clerk stopped backing away, but looked baffled.

And Humphrey, to his disappointment, got no mental signal back. Until, suddenly, he stepped

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into an aura of communication.

"Yes?" the clerk seemed to say. And a kind of implication of status came over, too. This was the proprietor, not a clerk. "Excuse my hesitation. I thought—" The message faded away in a whirl of images. Humphrey made out a stool, a lamp, a scroll.

Some kind of hospitality ritual, Humphrey decided. "Can you fix me up with a room?" he asked.

The whirl of images stopped. "Have you payment?" An image came of octagonal coins.

"No, but I wondered if—well, I could clean dishes or help around the place."

The Vernan looked dubious. "Just a moment. I'll call my wife."

Humphrey got a queer sensation then as the clerk turned away slightly. He got a clear image, but not of a wife—of some kind of plant.

But it was most positively a woman who obeyed the call!

"I was just asking your good husband—" Humphrey started, and stopped, confusion spreading through him like a fire.

"Pardon me," he blurted and made off, suddenly remembered the pack that he had grounded by the desk, went back for it and staggered out of the hotel.

He got well away before he dumped his burden and sat down, sweating, on the stone balustrade of a fountain. He was beginning to have an inkling of the difficulties that had faced his predecessors on Verna.

For telepathy obviously wasn't so simple. He had never had to think about it before in his life, but he had imagined it would be a straightforward enough process. Now he tried to reason it out.

These people used telepathy instead of speech, whereas we speak only what we want to say. They must have some telepathic parallel—some check over what they emitted. But he hadn't! Nor had his predecessors. They must have learned what he had learned—just what a human's thoughts involved.

As just now, for instance. Did his looking at a pretty female really involve what he had got back, reflected shockingly from her receptive mind? All that?

He shrugged. What if it did? It was only natural, wasn't it? And wasn't it natural for Vernans, too? It must be, otherwise it wouldn't have had that outraged effect on the hotelkeeper's wife; it would have been meaningless. And it was innocent enough. One didn't go around making intimate proposals to every girl one passed in the street.

But hadn't he done just that? And not in her ear. In that moment of flurry, he had been conscious that the husband had been in on the hook-up, too. Naturally.

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And who else within radius? Because it was obvious that they were more sensitive in their receiving than he was. The hotelkeeper had got his own message before he had stepped into the hotelkeeper's range.

But when that woman had called to the children, he had got that. But she had seemed to shout. If it had been a mental "shout," that seemed to indicate a measure of control. His problem was in the opposite direction — how did one learn to whisper?

PONDERING for minutes, he finally came up with the conclusion that everything would be all right as long as he confined his dealings to men. They would be the ones he'd have to see about grath skins and that was all that mattered, wasn't it? Unless — the thought halted him — this was a female-governed society. Well, he'd have to find out.

He put on his pack again wearily and set off in search of authority. One large building stood out in the center of the city. He headed for it.

He approached it from across what looked like, by its size and the statuary dotted around it, the city's main square. That, and the knot of people clustered around the entrance, reinforced his notion that it was the seat of rule. The crowd melted away as he strode across the square, leaving the entrance completely deserted as he went in.

But a dark-togaed doorkeeper stood his ground in the hall. Humphrey got an immediate sensation of resentment. But he'd met worse than that from doorkeepers on Earth.

"I want to see the chief," he announced briskly.

The resentment melted into a lot of images, just as the hotelkeeper's reaction had. But this time of a spinning sun, a multiheaded beast.

Humphrey repeated his question.

The doorkeeper shrugged. "Hold on." He departed down a long corridor. After several minutes, he came back. "The chief will see you. Seventh blue door on the left."

Telepathy had its clumsy side, Humphrey reflected as he went down the corridor. Vernans might be able to "shout," but even they evidently couldn't beam it. Or maybe sheer distance had defeated the doorkeeper, he thought, passing gray doors, green doors, orange, white, red. From them, as he passed, he got a slight but disconcerting sensation of annoyance — at him, from the people behind them. He felt like opening each door and apologizing, but suspected that might only make matters worse.

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The corridor turned at right angles before he reached the seventh blue door. After a moment of hesitation, he went in.

An aged giant with faded fair locks and a dark blue toga rose, bowed stiffly and sat down again, gesturing Humphrey to a chair.

"What can I do for you?" came the chief's message. It carried overtones of massive authority and irritation. And only one image — a vast, prickly hedge.

"I want to buy grath skins," Humphrey told him, realizing with sudden panic that he had neither seen one yet nor knew who had given them that name. A telepathic race didn't have names, surely, or perhaps the beasts were called after the noise they made?

ANYWAY, the chief understood immediately. Humphrey received a blast of anger. "I told the ones who came before you that they were not for sale. Didn't they tell you?"

Humphrey gave up the attempt to explain. "No," he confessed. "Do you mind telling me?"

"Because the barbaric society you come from has nothing to offer us in exchange. Grath skins are scarce, just enough to go around for our own use. We could hunt more, but there is no inducement."

Humphrey had already fished out his catalogue. "But we can offer many valuable things. Tape players, cyberscopes, rocket craft —"

He stopped, conscious that the chief was roaring his head off telepathically, though no sound es-

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caped his tight, motionless lips.

"Toys!" the chief exploded. "What do we want with such things? What use are the products of a people who cannot even control their thoughts?"

Humphrey started to get indignant. "I don't see that you've got so much to be smug about. Your setup strikes me as pretty primitive. You haven't got mechanical transport, radio, 3-D T.V.—"

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"Meaningless symbols," the chief said.

"Well, they're not meaningless in practice. How would you like to move around at two hundred — well, many times faster than a man can run? Or speak to —" He suddenly remembered and erased that one, but added enthusiastically, "How would you like to see what's going on on the other side of Verna — in living color?"

The chief laughed again, but with considerable weariness. "If I want to see what goes on on the other side of Verna, I can go there. Or hire artists. We have excellent artists."

"But the time!" Humphrey persisted.

"We live many years."

Humphrey started then, suddenly allowed sight of all the circuits of the Vernan sun that the old man had seen. It was like seeing the rings of a vast and ancient tree. Whatever the length of the Vernan year, it added up to a large chunk of time. Humphrey began to get the Vernan viewpoint in perspective. He strove against it.

"But all these things we can offer — there must be something there you need. Here's a whole section on installations, services. How would you like a latest model sanitation system for your city? Or complete pan-urban air-conditioning?"

The chief shook his head.

"A MiniSol power station, then? Compact, clean, sufficient to supply power for —"

"I've heard it all before," the chief told him. "We don't need any of those things. Sanitation we have. Air-conditioning we don't need. Power?" He shrugged. "We have a greater power. And a greater gift than any you can offer us. In telepathy we have communication, and in communication peace. Behind all the things you offer me, there is a picture of a desperately unbalanced people, struggling to make up for the lack of that one gift. If your people could only relax, they might find in themselves that power. Or they might have done so once. I fear it is atrophied in them now."

HUMPHREY stirred. "But we do have it, wouldn't you say? How else could you communicate with me?"

"Only because our own powers are refined — so refined that your crude thinking processes are like a scream in our minds. Do you understand now why your people are not welcome here?"

"I'm sorry," Humphrey apologized. "But — I thought you people had control."

"Only of transmission, and that is a complicated process. We can project, in an emergency, for —" Humphrey had a mental image of

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a distance that he guessed at about half a mile. "The cleverer among us can reduce our thoughts so as not to disturb our neighbors, though we are used to a background level of thought. You will understand that there are varying degrees of intensity as well as varying degrees of individual control."

"Couldn't I learn control?"

The chief smiled tolerantly. "Ages of development were needed for our people to learn how to handle their powers. It would be impossible for a stranger to learn even in a whole lifetime. The system of etiquette is extremely complex."

Humphrey was beginning to understand. "Like throwing up screens of images?"

"Ah, you've recognized that? Yes, that is a part of it. We sublimate the stronger emotions that way. The greater control a person has, the more refined he is regarded by his fellows."

Humphrey could see parallels with speech on Earth. "So that a man, addressing his girl friend or wife in public, would symbolize her — as a plant, say?"

"Exactly. As a plant or flower or whatever was customary between them. More intimate thoughts would be reserved for private occasions."

"I see."

The chief drew a hand across his brow. "I am tired. The interview is at an end." He caught Humphrey's apology. "Thank you, but it is not because of age. The telepathic faculty becomes richer with age, but somewhat less sensitive to shock. The average person could not have stood contact with you for a fraction of this time."

Humphrey rose. There was plainly nothing more to be said. He shouldered his pack and made for the door.

"Oh, just one thing more," the chief called after him. Humphrey turned. "In case you should think of going out to hunt grath yourself, I ought to warn you that grath also are telepathic in a simple but highly sensitive way. They can scent a thought a long way off." He smiled. "I should think they'd be able to detect yours before you even started out."

"Then how do your people do it?"

"Our hunters have the cultivated ability of fooling the grath by aping the beast's thought processes. The grath would rather believe his thoughts than his eyes."

COMING out into the waning light of the Vernan day, Humphrey felt wretched. It was clear enough now why his predecessors, for all their high A.Q.s, had found the assignment an im-

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possible one. An Earthman was about as welcome here as a visitor to Earth would be who went around making a noise like a buzz-saw. Only this was worse, being much more complicated.

He thought bitterly of the irony of it — of himself, a poet, a weaver of words, coming up against a race who hadn't the slightest need of them. His dreams of new vistas had already withered; now they looked pitiable.

Well, there was only one thing to do — settle down to being a pariah for the next seven days, until he could get a call through to Smith III — and for however long after that they took to send a ship to pick him up. There was no sense in trying any further. These people were pretty polite, under the circumstances, but testing their patience any more might be dangerous.

Night came with conventional tropical suddenness. Smoky yellow lights sprang up in the windows of the buildings. Humphrey sighed and looked around for a parking place. He found one in the angle of the plinth of a statue in the main square. He threw his pack down and himself by it. Miserably he took out his case of capsules and swallowed a couple of them. He settled down for the night — or tried to.

For although it was peaceful — the Vernans continued to give him a wide berth — the daytime warmth soon ebbed from the air. He shivered and drew his jerkin tighter about him, thinking dark thoughts of Crump and even darker ones of his own foolhardiness.

He fell asleep at last, but seemed to rebound immediately into wakefulness. A brilliant moon was shining full in his face and he thought at first that that was what had wakened him. Then he became conscious of two round violet eyes peering at him around the plinth. He lifted himself on an elbow.

A figure stepped out into the moonlight and came up to him. *Steady*, Humphrey told himself and thought frantically of an elephant — as violent a contrast to this graceful creature as his sleep-fuddled mind could think of. He could at least try to conform to local usage, however hopeless the chief had said it would be for him.

The girl was holding out a cloak that shimmered in the moonlight. She wore a similar one clasped at her throat.

"A grath skin," she explained. "I saw you and couldn't bear the thought of your sleeping out here without cover."

"Thank you," Humphrey answered gratefully, taking the cloak and laying it over his cramped limbs. It was wonderfully warm, for all its lightness. He saw now

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why Crump was anxious to get his hands on a supply.

"It's only an old one," the girl told him apologetically.

"It's fine, thank you. Where shall I return it?"

"You can keep it."

"I can? You're very kind." Humphrey turned over, hitching the cloak over his shoulders, annoyed that a meeting with a pretty girl by moonlight should find him at such a disadvantage.

HE was conscious that the girl didn't go away. He felt the nearness of her mind and realized that she was young, equivalent to an Earth seventeen-year-old. Her thoughts were like those of any

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kid doing something daring. But he didn't enjoy being the subject of them, hated being in her mind something like a cross between a caged animal and a forbidden fruit. He stirred and turned back to her.

"Now look here, I'm grateful, but—"

The girl suddenly laughed. Just as suddenly, she bit her lip. Humphrey got a clear impression that she knew she had done something not considered good form. But he was surprised at hearing a sound—any sound—escaping a Vernan's lips.

"Don't tell me you can speak?" he said. And said it aloud, to show what he meant.

He felt her embarrassment. A screen of images went up, but scattered, tenuous, as if she hadn't mastered the art yet. Now it was his turn to laugh.

In her embarrassment, she looked even prettier. Humphrey took a grip on himself. He thought desperately of the elephant again, but the image wasn't effective enough by half.

"Why don't you clear off?" he radiated angrily, then caught the answer. Partly from her mind, but that was only a confirmation of a thought from another quarter. He jerked around angrily and caught sight of several heads disappearing around the corner of a building.

"You're doing this for a bet!" he accused her furiously.

She looked awkward, but didn't budge.

"All right," he said. "You'll win the hard way. I hope it gives you a headache!"

He dived in his pack. He pulled out an anthology and opened it at random. He read out loud in as clear and ringing a voice as he could produce:

From the dark woods that breathe of fallen showers,
Harnessed with level rays in golden reins,
The zebras draw the dawn across the plains
Wading knee-deep among the scarlet flowers.
The sunlight, zithering their flanks with fire,
Flashes between the shadows as — as —

He faltered, aware of the girl's marvelous violet eyes upon him. But aware of something more—of her mind seized by his. Not frightened, disturbed, resentful, the only reactions he had met so far on Verna, but—yes, fascinated. And clamoring now for him to go on.

He complied dazedly:

— as they pass
Barred with electric tremors through the grass
Like wind along the gold strings of a lyre . . .

He went on to the end. Com-

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plete communion seemed to reign between them.

"WHAT is that?" she asked wonderingly at last.

"Poetry," he said aloud.

"Pur – tree," she said, and laughed delightedly.

"You can speak!" he said. But why had the verse, a piece by a twentieth-century poet, had such an effect on her? An effect that he could feel! Was it because the words concentrated symbols? And concentrated his own mind, too, as he read, so that his thoughts were no longer harsh and crude to a Vernan mind? No – positively welcome.

It seemed fantastic, impossible, almost wholly incredible.

But was it? Vernans only used symbols in a system of manners. Had they never, then, experienced the richness, the delight of them? Words were the magical power that drew images together, focusing them, relating one with another. And Vernans had never had need of words.

Didn't that explain a lot? Their lack of drive, for one thing. Hadn't a large part of Man's struggle upward risen from the sheer necessity to communicate?

He felt the dawning of a great idea, the solution. But –

"Yes!" the girl broke in eagerly upon his thoughts. "Yes!"

"I don't know. You're young. The young always welcome innovations. But how about the older ones?"

She dismissed the thought with a pout. "When their eyes are opened to what they have missed, they will fall over themselves to sample it." Her own unbelievable eyes lit up. "I'll be your prophet."

He had a sharp twinge of doubt, of conscience. Who could know what the ultimate effects would be? He might be laying a powder train. Maybe the Vernans were a lot of stick-in-the-muds, but it was a stable and peaceful stretch of mud. What right had he to disturb it?

"It is more than a right – it is a duty," the girl told him firmly.

"You think so?" He faltered. "How have you managed all this time without names? What can I call you?"

"Call? Oh, I don't know."

It was that elementary impasse that made Humphrey's mind up for him. A telepathic race did lack a whale of a lot of things, all for the lack of names. Accurate distances, shop names, those little things he had noticed. But, vastly more important, records.

A race built itself on the accumulated wisdom of previous generations, didn't it? But a race without language had no means of preserving that wisdom beyond the vehicle of the brain – and why should even a telepathic Vernan

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brain be less fallible than any other?

"I know what I'll call you," Humphrey said, delighted at the thought. "Calliope. The muse of poetry."

"Cal-eye-o-pee," she said, radiating pleasure.

"Right, then," he told her. "I'll start tomorrow."

"We'll start tomorrow." She snuggled up to him. "But now — more poetry."

SEVEN days later, Crump received a cable from Smith III, relayed from Humphrey on Verna.

Initial order one thousand grath skins, to be delivered in bimonthly installments two hundred. Payment per skin: one copy each Gardner's Diamond Treasury of English Lyric, one terran grammar, one terran dictionary —

Crump winced. Finding out that the Vernans were telepathic had obviously gone to the young fool's head. He read on. Then it became clear. The last sentence crystallized it. He flipped Clapperton's switch gleefully and summoned him to his office.

He told him the news. Clapperton's reaction was the same as Crump's had been at first.

"I don't believe it," he said flatly.

"I'll read on," Crump said. "'Advise Clapperton to revise his method. He must have thrown the first two men as he threw me. I was so busy trying to adapt that I nearly missed the answer. Luckily I saw it in time and was qualified to exploit it. Clapperton was right, but not right enough. An organism in a strange environment either has to adapt to it, get out or go under. But there's a fourth course — '"

Crump paused and his eye held a glint that, although he couldn't know it, was a close cousin to the one that had been in Humphrey's as he had tapped away at a black box on distant Verna — "'*Adapt the environment to itself.*'"

—ARTHUR SELLINGS

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Human Man's Burden

By ROBERT SHECKLEY

Massa Flaswell was lonely on his cold, cold planetoid . . . till it got hot and crowded!

Illustrated by WEISS

EDWARD FLASWELL bought his planetoid, sight unseen, at the Interstellar Land Office on Earth. He selected it on the basis of a photograph, which showed little more than a range of picturesque mountains. But Flaswell loved mountains and as he remarked to the Claims Clerk, "Might be gold in them thar hills, mightn't thar, pardner?"

"Sure, pal, sure," the clerk responded, wondering what man in his right mind would put himself several light-years from the nearest woman of any description whatsoever. No man in his right mind would, the clerk decided, and gave Flaswell a searching look.

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But Flaswell was perfectly sane. He just hadn't stopped to consider the problem.

Accordingly, Flaswell put down a small sum in credits and made a large promise to improve his land every year. As soon as the ink was dry upon his deed, he purchased passage aboard a second-class drone freighter, loaded it with an assortment of second-hand equipment and set out for his holdings.

Most novice pioneers find they have purchased a sizable chunk of naked rock. Flaswell was lucky. His planetoid, which he named Chance, had a minimal manufactured atmosphere that he could boost to breathable status. There was water, which his well-digging equipment tapped on the twenty-third attempt. He found no gold in them thar hills, but there was some exportable thorium. And best of all, much of the soil was suitable for the cultivation of dir, olge, smis and other luxury fruits.

As Flaswell kept telling his robot foreman, "This place is going to make me rich!"

"Sure, Boss, sure," the robot always responded.

THE planetoid had undeniable promise. Its development was an enormous task for one man, but Flaswell was only twenty-seven years old, strongly built and of a determined frame of mind. Beneath his hand, the planetoid flourished. Months passed and Flaswell planted his fields, mined his picturesque mountains and shipped his goods out by the infrequent drone freighter that passed his way.

One day, his robot foreman said to him, "Boss Man, sir, you don't look too good, Mr. Flaswell, sir."

Flaswell frowned at this speech. The man he had bought his robots from had been a Human Supremicist of the most rabid sort, who had coded the robots' responses according to his own ideas of the respect due Human People. Flaswell found this annoying, but he couldn't afford new response tapes. And where else could he have picked up robots for so little money?

"Nothing wrong with me, Gunga-Sam," Flaswell replied.

"Ah! I beg pardon! But this is not so, Mr. Flaswell, Boss. You have been talking to yourself in the fields, you should excuse my saying it."

"Aw, it's nothing."

"And you have the beginning of a tic in your left eye, sahib. And your fingers are trembling. And you are drinking too much. And—"

"That's enough, Gunga-Sam. A robot should know his place," Flaswell said. He saw the hurt expression that the robot's metal

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face somehow managed to convey. He sighed and said, "You're right, of course. You're always right, old friend. What's the matter with me?"

"You are bearing too much of the Human Man's Burden."

"Don't I know it!" Flaswell ran a hand through his unruly black hair. "Sometimes I envy you robots. Always laughing, carefree, happy—"

"It is because we have no souls."

"Unfortunately I do. What do you suggest?"

"Take a vacation, Mr. Flaswell, Boss," Gunga-Sam suggested, and wisely withdrew to let his master think.

Flaswell appreciated his servitor's kindly suggestion, but a vacation was difficult. His planetoid, Chance, was in the Throcian System, which was about as isolated as one could get in this day and age. True, he was only a fifteen-day flight from the tawdry amusements of Cythera III and not much farther from Nagóndicon, where considerable fun could be obtained for the strong in stomach. But distance is money, and money was the very thing Flaswell was trying to make on Chance.

HE planted more crops, dug more thorium and began to grow a beard. He continued to mumble to himself in the fields and to drink heavily in the evenings. Some of the simple farm robots grew alarmed when Flaswell lurched past and they began praying to the outlawed Combustion God. But loyal Gunga-Sam soon put a stop to this ominous turn of events.

"Ignorant mechanicals!" he told them. "The Boss Human, he all right. Him strong, him good! Believe me, brothers, it is even as I say!"

But the murmurings did not cease, for robots look to Humans to set an example. The situation might have gotten out of hand if Flaswell had not received, along with his next shipment of food, a shiny new Roebuck-Ward catalogue.

Lovingly he spread it open upon his crude plastic table and, by the glow of a simple cold-light bulb, began to pore over its contents. What wonders there were for the isolated pioneer! Home distilling plants, and moon makers, and portable solidovision, and—

Flaswell turned a page, read it, gulped and read it again. It said:

MAIL ORDER BRIDES!

Pioneers, why suffer the curse of loneliness alone? Why bear the Human Man's Burden singly? Roebuck-Ward is now offering, for the first time, a limited selection of *Brides for the Frontiersman!*

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The Roebuck-Ward Frontier Model Bride is carefully selected for strength, adaptability, agility, perseverance, pioneer skills and, of course, a measure of comeliness. These girls are conditioned to any planet, since they possess a relatively low center of gravity, a skin properly pigmented for all climates, and short, strong toe and fingernails. Shapewise, they are well proportioned and yet not distractingly contoured, a quality which the hard-working pioneer should appreciate.

The Roebuck-Ward Frontier Model comes in three general sizes (see specifications below) to suit any man's taste. Upon receipt of your request, Roebuck-Ward will quick-freeze one and ship her to you by third-class Drone Freight. In this way, your express charges are kept to an absolute minimum.

Why not order a Frontier Model Bride *TODAY*?

Flaswell called for Gunga-Sam and showed him the advertisement. Silently the mechanical read, then looked his master full in the face.

"This is surely it, effendi," the foreman said.

"You think so, huh?" Flaswell stood up and began to pace nervously around the room. "But I wasn't planning on getting married just yet. I mean what kind of a way is this to get married? How do I know I'll like her?"

"It is proper for Human Man to have Human Woman."

"Yeah, but—"

"Besides, do they quick-freeze a preacher and ship *him* out, too?"

A slow smile broke over Flaswell's face as he digested his servant's shrewd question. "Gunga-Sam," he said, "as usual, you have gone directly to the heart of the matter. I guess there's a sort of moratorium on the ceremony while a man makes up his mind. Too expensive to quick-freeze a preacher. And it *would* be nice to have a gal around who could work her share."

Gunga-Sam managed to convey an inscrutable smile.

Flaswell sat down and ordered a Frontier Model Bride, specifying the small size, which he felt was plenty big enough. He gave Gunga-Sam the order to radio.

THE next few weeks were filled with excitement for Flaswell and he began to scan the skies anxiously. The robots picked up the mood of anticipation. In the evenings, their carefree songs and dances were interspersed with whispering and secret merriment. The mechanicals said to Gunga-Sam over and over again, "Hey, Foreman! The new Human Woman Boss, what will she be like?"

"It's none of your concern," Gunga-Sam told them. "That's Human Man business and you robots leave it alone." But at the end, he was watching the skies as anxiously as anyone.

During those weeks, Flaswell meditated on the virtues of Fron-

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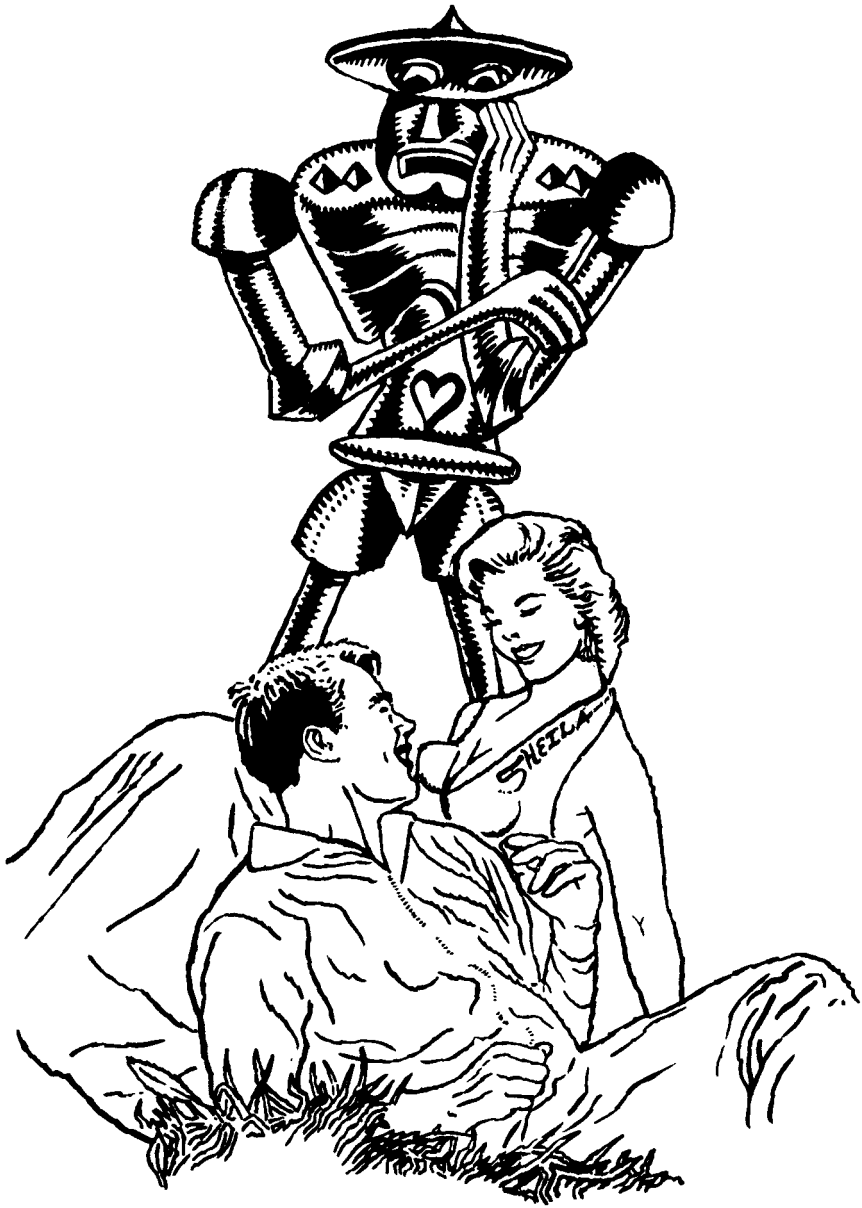

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tier Woman. The more he thought about it, the more he liked the idea. No pretty, useless, helpless painted woman for him! How pleasant it would be to have a cheerful, common-sense, down-to-gravity gal who could cook, wash, pretty up the place, boss the house robots, make clothes, put up jellies. . . .

So he dreamed away the time and bit his nails to the quick.

At last the drone freighter flashed across the horizon, landed, jettisoned a large packing case, and fled in the direction of Amyra IV.

The robots brought the case to Flaswell.

"Your new bride, sir!" they shouted triumphantly, and flung their oilcans in the air.

Flaswell immediately proclaimed a half-day holiday and soon he was alone in his living room with the great frigid box marked *"Handle with Care. Woman Inside."*

He pressed the defrosting controls, waited the requisite hour, and opened the box. Within was another box, which required two hours to defrost. Impatiently he waited, pacing up and down the room and gnawing on the remnants of his fingernails.

And then the time was up, and with shaking hands, Flaswell opened the lid and saw —

"Hey, what is this?" he cried.

THE girl within the box blinked, yawned like a kitten, opened her eyes, sat up. They stared at each other and Flaswell knew that something was terribly wrong.

She was clothed in a beautiful, impractical white dress and her name, *Sheila,* was worked upon it in gold thread. The next thing Flaswell noticed was her slenderness, which was scarcely suitable for hard work on outplanet conditions. Her skin was a creamy white, obviously the kind that would blister under his planetoid's fierce summer sun. Her hands were long-fingered, red-nailed, elegant—completely unlike anything the Roebuck-Ward Company had promised. As for her legs and other parts, Flaswell decided they would be very well on Earth, but not here, where a man must pay attention to his work.

She couldn't even be said to have a low center of gravity. Quite the contrary.

Flaswell felt, not unreasonably, that he had been swindled, duped, made a fool of.

Sheila stepped out of the crate, walked to a window and looked out over Flaswell's flowering green fields and his picturesque mountains beyond them.

"But where are the palm trees?" she asked.

"Palm trees?"

"Of course. They told me that Srinigar V had palm trees."

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"This is not Srinigar V," Flaswell said.

"But aren't you the Pasha of Srae?" Sheila gasped.

"Certainly not. I am a Frontiersman. Aren't you a Frontier Model Bride?"

"Do I *look* like a Frontier Model Bride?" Sheila snapped, her eyes flashing. "I am the Ultra Deluxe Luxury Model Bride and I was supposed to go to the subtropical paradise planet of Srinigar V."

"We've both been cheated. The shipping department must have made an error," Flaswell said gloomily.

The girl looked around Flaswell's crude living room and a wince twinged her pretty features. "Oh, well. I suppose you can arrange transportation for me to Srinigar V."

"I can't even afford to go to Nagóndicon," Flaswell said. "I will inform Roebuck-Ward of their error. They will undoubtedly arrange transportation for you, when they send me my Frontier Model Bride."

Sheila shrugged her shoulders. "Travel broadens one," she said.

Flaswell nodded. He was thinking hard. This girl had, it was obvious, no pioneering qualities. But she was amazingly pretty. He saw no reason why her stay shouldn't be a pleasant one for both.

"Under the circumstances," Flaswell said, with an ingratiating smile, "we might as well be friends."

"Under what circumstances?"

"We are the only two Human People on the planet." Flaswell rested a hand lightly on her shoulder. "Let's have a drink. Tell me all about yourself. Do you—"

AT that moment, he heard a loud sound behind. He turned and saw a small, squat robot climbing from a compartment in the packing case.

"What do *you* want?" Flaswell demanded.

"I," said the robot, "am a Marrying Robot, empowered by the government to provide legal marriages in space. I am further directed by the Roebuck-Ward Company to act as guardian, duenna and protector for the young lady in my charge, until such time as my primary function, to perform a ceremony of marriage, has been accomplished."

"Uppity damned robot," Flaswell grumbled.

"What did you expect?" Sheila asked. "A quick-frozen Human preacher?"

"Of course not. But a robot duenna—"

"The very best kind," she assured him. "You'd be surprised at how some men act when they get a few light-years from Earth."

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"I would?" Flaswell said disconsolately.

"So I'm told," Sheila replied, demurely looking away from him. "And after all, the promised bride of the Pasha of Srae should have a guardian of some sort."

"Dearly beloved," the robot intoned, "we are here gathered to join —"

"Not now," Sheila said loftily. "Not this one."

"I'll have the robots fix a room for you," Flaswell growled, and walked away, mumbling to himself about Human Man's Burden.

He radioed Roebuck-Ward and was told that the proper model Bride would be sent at once and the interloper shipped elsewhere. Then he returned to his farming and mining, determined to ignore the presence of Sheila and her duenna.

Work continued on Chance. There was thorium to be mined out of the soil and new wells to dig. Harvest time was soon at hand, and the robots toiled for long hours in the green-blossomed fields, and lubricating oil glistened on their honest metal faces, and the air was fragrant with the perfume of the dir flowers.

Sheila made her presence felt with subtle yet surprising force. Soon there were plastic lampshades over the naked cold-light bulbs and drapes over the stark windows and scatter rugs on the floors. And there were many other changes around the house that Flaswell felt rather than saw.

His diet underwent a change, too. The robot chef's memory tape had worn thin in many spots, so all the poor mechanical could remember how to make was beef Stroganoff, cucumber salad, rice pudding and cocoa. Flaswell had, with considerable stoicism, been eating these dishes ever since he came to Chance, varying them occasionally with shipwreck rations.

THEN Sheila took the robot chef in hand. Patiently she impressed upon his memory tape the recipes for beef stew, pot roast, tossed green salad, apple pie, and many others. The eating situation upon Chance began to improve markedly.

But when Sheila put up smis jelly in vacuum jars, Flaswell began to have doubts.

Here, after all, was a remarkably practical young lady, in spite of her expensive appearance. She could do all the things a Frontier Wife could do. And she had other attributes. What did he need a regular Roebuck-Ward Frontier Model for?

After mulling this for a while, Flaswell said to his foreman, "Gunga-Sam, I am confused."

"Ah?" said the foreman, his metal face impassive.

"I guess I need a little of that

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robot intuition. She's doing very well, isn't she, Gunga-Sam?"

"The Human Woman is taking her proper share of Human Person's Burden."

"She sure is. But can it last? She's doing as much as any Frontier Model Wife could do, isn't she? Cooking, canning—"

"The workers love her," Gunga-Sam said with simple dignity. "You did not know, sir, but when that rust epidemic broke out last week, she toiled night and day, bringing relief and comforting the frightened younger robots."

"She did all that?" Flaswell gasped, shaken. "But a girl of her background, a luxury model—"

"It does not matter. She is a Human Person and she has the strength and nobility to take on Human Person's Burden."

"Do you know," Flaswell said slowly, "this has convinced me. I really believe she is fit to stay here. It's not her fault she isn't a Frontier Model. That's a matter of screening and conditioning, and you can't change that. I'm going to tell her she can stay. And then I'll cancel the other Roebuck order."

A strange expression glowed in the foreman's eyes, an expression almost of amusement. He bowed low and said, "It shall be as the master wishes."

Flaswell hurried out to find Sheila.

SHE was in the sick bay, which had been constructed out of an old toolshed. With the aid of a robot mechanic, she was caring for the dents and dislocations that are the peculiar lot of metal-skinned beings.

"Sheila," Flaswell said, "I want to speak to you."

"Sure," she answered absently, "as soon as I tighten this bolt."

She locked the bolt cleverly into place, and tapped the robot with her wrench.

"There, Pedro," she said, "try that leg now."

The robot stood up gingerly, put weight on the leg, found that it held. He capered comically around the Human Woman, saying, "You sure fixed it, Boss Lady. Gracias, ma'am."

And he danced out into the sunshine.

Flaswell and Sheila watched him go, smiling at his antics. "They're just like children," Flaswell said.

"One can't help but love them," Sheila responded. "They're so happy, so carefree—"

"But they haven't got souls," Flaswell reminded her.

"No," she agreed somberly. "They haven't. What did you wish to see me about?"

"I wanted to tell you—" Flaswell looked around. The sick bay was an antiseptic place, filled with wrenches, screwdrivers, hacksaws,

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ballpeen hammers and other medical equipment. It was hardly the atmosphere for the sort of announcement he was about to make.

"Come with me," he said.

They walked out of the hospital and through the blossoming green fields, to the foot of Flaswell's spectacular mountains. There, shadowed by craggy cliffs, was a still, dark pool of water overhung with giant trees, which Flaswell had force-grown. Here they paused.

"I wanted to say this," Flaswell said. "You have surprised me completely, Sheila. I expected you would be a parasite, a purposeless person. Your background, your breeding, your appearance all pointed in this direction. But I was wrong. You have risen to the challenge of a Frontier environment, have conquered it triumphantly, and have won the hearts of everybody."

"Everybody?" Sheila asked very softly.

"I believe I can speak for every robot on the planetoid. They idolize you. I think you belong here, Sheila."

The girl was silent for a long while, and the wind murmured through the boughs of the giant force-grown trees, and ruffled the black surface of the lake.

Finally she said, "Do *you* think I belong here?"

Flaswell felt engulfed by her exquisite perfection, lost in the topaz depths of her eyes. His breath came fast, he touched her hand, her fingers clung.

"Sheila. . . ."

"Yes, Edward. . . ."

"Dearly beloved," a strident metallic boice barked, "we are here gathered—"

"Not now, you fool!" Sheila cried.

THE Marrying Robot came forward and said sulkily, "Much as I hate to interfere in the affairs of Human People, my taped coefficients are such that I must. To my way of thinking, physical contact is meaningless. I have, by way of experiment, clashed limbs with a seamstress robot. All I got for my troubles was a dent. Once I thought I experienced something, an electric something that shot through me giddily and made me think of slowly shifting geometric forms. But upon examination, I discovered the insulation had parted from a conductor center. Therefore, the emotion was invalid."

"Uppity damned robot," Flaswell growled.

"Excuse my presumption. I was merely trying to explain that I personally find my instructions unintelligible—that is, to prevent any and all physical contact until a ceremony of marriage has been

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performed. But there it is; those are my orders. Can't I get it over with now?"

"No!" said Sheila.

The robot shrugged his shoulders fatalistically and slid into the underbrush.

"Can't stand a robot who doesn't know his place," said Flaswell. "But it's all right."

"What?"

"Yes," Flaswell said, with an air of conviction. "You are as good as any Frontier Model Wife and far prettier. Sheila, will you marry me?"

The robot, who had been thrashing around in the underbrush, now slid eagerly toward them.

"No," said Sheila.

"No?" Flaswell repeated uncomprehendingly.

"You heard me. No! Absolutely no!"

"But why? You fit so well here, Sheila. The robots adore you. I've never seen them work so well—"

"I'm not interested in your robots," she said, standing very straight, her hair disheveled, her eyes blazing. "And I am not interested in your planetoid. And I am most emphatically not interested in you. I am going to Srinigar V, where I will be the pampered bride of the Pasha of Srae!"

They stared at each other, Sheila white-faced with anger, Flaswell red with confusion.

The Marrying Robot said, "Now should I start the ceremony? Dearly beloved. . . ."

Sheila whirled and ran toward the house.

"I don't understand," the Marrying Robot said plaintively. "It's all very bewildering. When does the ceremony take place?"

"It doesn't," Flaswell said, and stalked toward the house, his brows beetling with rage.

The robot hesitated, sighed metallically and hurried after the Ultra Deluxe Luxury Model Bride.

ALL that night, Flaswell sat in his room, drank deeply and mumbled to himself. Shortly after dawn, the loyal Gunga-Sam knocked and slipped into the room.

"Women!" Flaswell snarled to his servitor.

"Ah?" said Gunga-Sam.

"I'll never understand them," Flaswell said. "She led me on. I thought she wanted to stay here. I thought. . . ."

"The mind of Human Man is murky and dark," said Gunga-Sam, "but it is as crystal compared to the mind of Human Woman."

"Where did you get that?" Flaswell asked.

"It is an ancient robot proverb."

"You robots. Sometimes I wonder if you *don't* have souls."

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"Oh, no, Mr. Flaswell, Boss. It is expressly written in our Construction Specifications that robots are to be built with no souls, to spare them anguish."

"A very wise provision," Flaswell said, "and something they might consider with Human People, too. Well, to hell with her. What do you want?"

"I came to tell you, sir, that the drone freighter is landing."

Flaswell turned pale. "So soon? Then it's bringing my new bride!"

"Undoubtedly."

"And it will take Sheila away to Srinigar V."

"Assuredly, sir."

Flaswell groaned and clutched his head. Then he straightened and said, "All right, all right. I'll see if she's ready."

He found Sheila in the living room, watching the drone freighter spiral in. She said, "The very best of luck, Edward. I hope your new bride fulfills all your expectations."

The drone freighter landed and the robots began removing a large packing case.

"I had better go," Sheila said. "They won't wait long." She held out her hand.

Flaswell took it.

He held her hand for a moment, then found he was holding her arm. She did not resist, nor did the Marrying Robot break into the room. Flaswell suddenly found that Sheila was in his arms. He kissed her and felt exactly like a small sun going nova.

Finally she said, "Wow," huskily, in a not quite believing voice.

Flaswell cleared his throat twice. "Sheila, I love you. I can't offer you much luxury here, but if you'd stay —"

"It's about time you found out you love me, you dope!" she said. "Of course I'm staying!"

THE next few minutes were ecstatic and decidedly vertiginous. They were interrupted at last by the sound of loud robot voices outside. The door burst open and the Marrying Robot stamped in, followed by Gunga-Sam and two farm mechanicals.

"Really!" the Marrying Robot said. "It is unbelievable! To think I'd see the day when robot pitted himself against robot!"

"What happened?" Flaswell asked.

"This foreman of yours *sat* on me," the Marrying Robot said indignantly, "while his cronies held my limbs. I was merely trying to enter this room and perform my duty as set forth by the government and the Roebuck-Ward Company."

"Why, Gunga-Sam!" Flaswell said, grinning.

The Marrying Robot hurried up to Sheila. "Are you damaged? Any dents? Any short-circuits?"

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"I don't think so," said Sheila breathlessly.

Gunga-Sam said to Flaswell, "The fault is all mine, Boss, sir. But everyone knows that Human Man and Human Woman need solitude during the courtship period. I merely performed what I considered my duty to the Human Race in this respect, Mr. Flaswell, Boss, sahib."

"You did well, Gunga-Sam," Flaswell said. "I'm deeply grateful and — oh, Lord!"

"What is it?" Sheila asked apprehensively.

Flaswell was staring out the window. The farm robots were carrying the large packing case toward the house.

"The Frontier Model Bride!" said Flaswell. "What'll we do, darling? I canceled you and legally contracted for the other one. Do you think we can break the contract?"

Sheila laughed. "Don't worry. There's no Frontier Model Bride in that box. Your order was canceled as soon as it was received."

"It was?"

"Certainly." She looked down, ashamed. "You'll hate me for this —"

"I won't," he promised. "What is it?"

"Well, Frontiersmen's pictures are on file at the Company, you know, so Brides can see what they're getting. There *is* a choice — for the girls, I mean — and I'd been hanging around the place so long, unable to get unclassified as an Ultra Deluxe, that I — I made friends with the head of the order department. And," she said all in a rush, "I got myself sent here."

"But the Pasha of Srae —"

"I made him up."

"But why?" Flaswell asked puzzledly. "You're so pretty —"

"That everybody expects me to be a toy for some spoiled, pudgy idiot," she finished with a good deal of heat. "I don't want to be! I want to be a wife! And I'm just as good as any chunky, homely female!"

"Better," he said.

"I can cook and doctor robots and be practical, can't I? Haven't I proved it?"

"Of course, dear."

She began to cry. "But nobody would believe it, so I had to trick you into letting me stay long enough to — to fall in love with me."

"Which I did," he said, drying her eyes for her. "It's all worked out fine. The whole thing was a lucky accident."

What looked like a blush appeared on Gunga-Sam's metallic face.

"You mean it wasn't an accident?" Flaswell exclaimed.

"Well, sir, Mr. Flaswell, effendi, it is well known that Human Man needs *attractive* Human Woman.

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The Frontier Model sounded a little severe and Memsahib Sheila is a daughter of a friend of my former master. So I took the liberty of sending the order directly to her. She got her friend in the order department to show her your picture and ship her here. I hope you are not displeased with your humble servant for disobeying."

"WELL, I'll be damned," Flaswell finally got out. "It's like I always said—you robots understand Human People better than anyone." He turned to Sheila. "But what *is* in that packing case?"

"My dresses and my jewelry, my shoes, my cosmetics, my hair styler, my—"

"But—"

"You want me to look nice when we go visiting, dear," Sheila said. "After all, Cythera III is only fifteen days away. I looked it up before I came."

Flaswell nodded resignedly. You had to expect something like this from an Ultra Deluxe Luxury Model Bride.

"Now!" Sheila said, turning to the Marrying Robot.

The robot didn't answer.

"Now!" Flaswell shouted.

"You're quite sure?" the robot queried sulkily.

"Yes! Get started!"

"I just don't understand," the Marrying Robot said. "Why now? Why not last week? Am I the only sane one here? Oh, well. Dearly beloved. . . ."

And the ceremony was held at last. Flaswell proclaimed a three day holiday and the robots sang and danced and celebrated in their carefree robot fashion.

Thereafter, life was never the same on Chance. The Flaswells began to have a modest social life, to visit and be visited by couples fifteen and twenty days out, on Cythera III, Tham and Randico I. But the rest of the time, Sheila was an irreproachable Frontier Wife, loved by the robots and idolized by her husband. The Marrying Robot, following his instruction manual, retrained himself as an accountant and bookkeeper, skills for which his mentality was peculiarly well suited. He often said the whole place would go to pieces if it weren't for him.

And the robots continued to dig thorium from the soil, and the dir, olge and smis blossomed, and Flaswell and Sheila shared together the responsibility of Human People's Burden.

Flaswell was always quite vocal on the advantages of shopping at Roebuck-Ward. But Sheila knew that the real advantage was in having a foreman like the loyal, soulless Gunga-Sam.

—ROBERT SHECKLEY

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GALAXY'S 5 Star Shelf

THE SEARCH FOR BRIDEY MURPHY by Morey Bernstein. Doubleday & Co., Inc., $3.75

BRIDEY has captured the imagination of the American public as few books have since WW II. Mr. Bernstein, Senior, once remarked to Junior that Dr. J. B. Rhine of Duke "will never make a dime out of it," meaning parapsychology, but that assuredly does not hold true of his son's book. Besides its phenomenal sales, it is to be produced (as fiction?) by Hollywood.

Its subject matter, reincarnation, is old hat. The more recent device, recall via hypnosis, is almost as old.

Then why has the book caught fire? Several guesses: Honest intellectual curiosity, the hope for communication with the hereafter such as follows every war, crackpottery and cultism. Also, in itself it is blithe and breezily entertaining until it reaches the verbatim record of the several trances undergone by the subject, "Mrs. Simmons," when it assumes an aura of authenticity.

Is it authentic? *That* is the real question. Hypnotist and subject

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insist it is. Authorities almost unanimously agree that the subject, from books, plays or films that have sunk into her subconscious, has built up a character in obedience to a hypnotic command.

Much of the data, if it actually existed, would be on public record. It isn't.

Nevertheless, though Bernstein contributes nothing new to our knowledge of hypnotism, the book may prove valuable in instigating valid research.

REACH FOR TOMORROW by Arthur C. Clarke. Ballantine Books, $2.00

FROM the first of his published stories to some of his most recent, this volume presents an excellent cross-section of the art of one of science fiction's foremost exponents. Should you wish to wean a neophyte, I can't think of a better assortment or one better selected for change of pace.

"Rescue Party," Clarke's first published story, remains as fresh and provocative after ten years as on publication. It is the only yarn in which Clarke gives full vent to his cosmic imagination, but that in no way detracts from the color and interest of the remainder.

That he is capable of turning out pure horror is attested to in "A Walk In the Dark" and "The Parasite." The whimsical humor of "Trouble with the Natives" and the tongue-in-cheek sly clowning of "Jupiter Five" add spice to the collection.

A couple of stories are somewhat below the general level of the book, but who can quibble about the side-dishes when the main course is so appetizing? The volume is also available paperbound.

DOUBLE STAR by Robert A. Heinlein. Doubleday & Co., Inc., $2.95

SOMEWHERE or other, I lost count, but I estimate this to be Heinlein's twentieth book. His current offering is an excellent example of his ability to take one of the oldest plots in any literature, that of impersonation, and present it as an enjoyable reading experience.

The story opens, as have countless space operas, in a bar complete with Martians and a huge spaceman. After this prosaic beginning, however, any resemblance to space opera is accidental.

The yarn's hero is an unlikely-seeming thespian named The Great Lorenzo, who has been picked by a futuristic IBM machine as the likeliest impersonator of John J. Bonforte, leader of the Political Expansionist coalition. Seems as if some political

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opponents of Bonforte have kidnaped him on the eve of a Martian presentation in his honor.

The Martians, sticklers for protocol, would never forgive his absence from such an honor for any reason except death, aside from which it would reflect unfavorably on all Earthmen. It is up to Lorenzo to carry off a masquerade that will deceive even close friends of the missing leader.

I don't think I'm giving the story away when I say that he succeeds, for the *real* story begins when he has to carry on *beyond* the acceptance of the Martian honor.

The book does not measure up to the standards of the author's *Sixth Column* or *The Puppet Masters,* but it makes pleasant and exciting reading.

FORBIDDEN PLANET by W. J. Stuart. Farrar, Straus & Cudahy, Inc., $3.00

I MUST admit that I approached this book with a great deal of trepidation, as who wouldn't, considering that it is based on a Cinemascope and color Hollywood film? Need I remind you of what they did to Jones' *This Island Earth*? Can you visualize what the book version of that would have been if based on the film? In color, yet!

I am delighted to report that, though this is unabashed space opera, it is of a very superior kind. Stuart, whoever he might be, has done an excellent job of camouflaging the obvious Hollywood touch. For instance, there's a scientist and his beautiful daughter, marooned on a far-from-desert planet — scares you to, huh? — yet Stuart actually makes it palatable.

He also carries off the difficult literary feat of telling his story in the first person singular from three different viewpoints: the scientist exposed to the superior knowledge of a long-dead race; the ship's doctor of the expedition sent to rescue him; and the hard-bitten young commander of the rescue ship.

Taut and tenseful despite its celluloid ancestry.

MYSTERIES OF THE NORTH POLE by Robert de la Croix. The John Day Co., $3.50

WHEN, in the next couple of hundred years, space travel has become a commonplace, someone is going to write a *Mysteries of the Asteroid Belt* or *M. o. t. Moon* and it will read amazingly like this book. The protagonists will also be men of courage, daring and physical fortitude and their enemy, environment, will be still more hostile, but advanced technology will tend to make an almost exact comparison possible.

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Also, there will undoubtedly be visionaries, carried away by their confidence in some outre device, such as occurred in "Andre's Folly," an account of a disastrous attempt to fly over the North Pole with a hydrogen-filled balloon. And the fantastic loss of life during the centuries-long search for the Northwest Passage will most likely be duplicated by expeditions seeking an economically feasible route through the Asteroid Belt.

All in all, an invigorating exercise in extrapolation, such as the author never intended, that I recommend highly to any fan with a restless imagination.

LUCKY STARR AND THE BIG SUN OF MERCURY by Paul French. Doubleday and Co., Inc., $2.50

NUMBER four in the juvenile Lucky Starr series is as fast-moving as its predecessors. This time David Starr, member of the Council of Science, is sent to Mercury to investigate why things are going wrong with Project Light, a pure science research project. It is under condemnation for political reasons by a Senator Swenson as a waste of taxpayer's money, but even without an ENIAC, you can see for yourself that the trouble and Swenson are tied by the same knot.

Plenty of interesting facts are tossed in for free by the author without slowing the appropriately swift action.

NOTES . . . Gnome Press is putting out "The Science-Fiction World," a handsome little paper edited by Robert Bloch and Bob Tucker, crammed with information of general interest. Also specific dope on cinema releases and planning and magazine and fan doings. It's free from Gnome Press, 80 E. 11 St., N. Y. 3, N. Y. . . . *Wombats and Moondust*, a slender volume of poetry in a fantastic vein by Thomas Burnett Swann, $2.50 from Wings Press of Mill Valley, Calif. In no sense science fiction, but off-track and of possible interest. . . . *Round Trip to Hell in a Flying Saucer* by Cecil Michael, $2.50 from Vantage Press, has a cowcatcher title and is honest enough to call itself fiction, as others in its field do not do. It's a visitation yarn with some weird concepts that would have been more effective in surer hands. . . . *Aircraft Today* 1956 by John W. R. Taylor, Philosophical Library, $4.75, is another of the beautifully English-printed and illustrated factual issues. This is an annual collection of articles on every aspect of aviation — even tells you "How to Build Yourself an Aeroplane"!

—FLOYD C. GALE

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Seeing-Eye Dog

By DANIEL F. GALOUYE

The problem was not whether Curt could accept his being blind — it had to accept him!

A MOSAIC of sound swirled in the impenetrable, oppressive darkness: the sonorous ticking of the wall clock, the shrill cries of children at play, the distant blatancy of angry auto horns.

Curt Markson gripped the knurled arm rests and leaned forward as though he might pierce the black pall.

"But I've qualified, haven't I?"

Somewhere beyond the curtain of blackness, the director's swivel chair creaked tentatively. "Yes — and no. Oh, you satisfy the objective requirements. But I'm afraid, Mr. Markson, LITE cannot approve assignment of an animal in your case."

"But I've passed all the tests!"

"You have," Dr. Wendt con-

Illustrated by CAL

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ceded wearily. "However, your business partner here can describe how you've affected the Institute's animals. He's been at all your sessions. Perhaps you hadn't noticed, but it wasn't at all pleasant for the dogs."

Alex Bardell took his arm solicitously. "That's true, Curt."

DISMALLY, Curt remembered the pitiful whimpering of the staff animals, their yelps of pain, the scurrying staccato of their claws as they thrashed about and cowered in anguish.

"Visual empathy is normally achieved with a delicate touch, scarcely felt by the Seeing-Eye Dog," Wendt explained. "But occasionally there is the person with an unbearably rough level of mental impact. It's as though someone were grinding into the animal's brain with a rasp. Unfortunately, you're one of those persons."

"But can't I tone down?"

"No one has been able to appreciably alter his impact index yet, although recent research *has* been encouraging."

"I can keep on trying!"

"It isn't that simple. Besides the humane consideration, there's the fact that rough mental contact drives an animal mad. And there's no telling when it may identify the source of its anguish and attack — viciously."

Curt groped for the desk, found its edge. "But the LITE staff dogs stood up under the punishment. Can't I have one of them?"

"No," Wendt said bluntly. "Each animal here has gone through years of special preparation to train applicants. Each is the result of generations of nucleonically stimulated inbreeding. In all other respects, though, they're still just dogs. Their breaking point is merely higher than any stock animal that could be assigned to you by the Labonitz Institute of Telepathic Empathy."

"But I've got to have my sight before next week!" Curt insisted. "I have to know by then whether I can live a normal life with a Seeing-Eye Dog!"

"I know. Your fiancee is due back then. How long has it been since your accident?"

"Two months." Curt dropped back into his chair.

"And you're organically blind?"

"*Hopelessly* blind."

"You've been in darkness now for sixty days with a permanent optic nerve lesion." Wendt's voice was coldly impersonal. "Mr. Markson, *I* was sightless *forty years* before Dr. Labonitz perfected the VE technique."

Animal nails clattered on the tile floor and suddenly a dog's breath panted in Curt's face as two forepaws plopped down on his leg.

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Wendt had sent his "eyes" up for a closer look.

LIKE the buzzing of a horde of insects, rubber droned monotonously on concrete as Curt tried to visualize the rush of summer green past the car.

"Don't take me back to the office, Alex," he said despondently. "I'm not much use there."

Alex laughed. "Of course you are. As soon as you readjust, you'll be contributing as much as before."

Curt was depressively silent. Then, "It's no good. I'm going to pull out of the business—get away entirely."

Alex jolted the car to a stop. "Don't you realize I *want* you to share the firm? I still can't help feeling responsible for the accident."

"Forget it. The only reason the company plane crashed was because I didn't make sure I had enough gas."

"But I told you I'd have the gauge fixed and see that the tank was full."

"You couldn't—you had car trouble and there was no way to send word before I took off."

Alex drove on silently and Curt played a spiritless game of trying to identify the sounds that came to him in the eternal night.

"Alex, I don't want you to think I don't appreciate everything. You've been like a brother. Even in the matter of Sue—"

"There was nothing magnanimous in that. She loved you, not me."

Curt slumped. "That's pretty much like water over the dam. When she gets back in town, I'm not even going to see her. Things will be different then . . . if you're still interested."

Alex exploded. "So you want me to rescue her? For God's sake, knock off the dirge! Anyway, I've figured out—"

"We're not headed downtown, are we?"

"No. I didn't want to say anything until I was sure I could make the connections. But when I saw you'd be turned down by the Institute, I got in touch with a kennel owner."

He braked the car. Curt felt the wheels swerve and roll up the incline of his driveway. A dog yelped anxiously nearby and there was the clanking of a chain.

"I went to this kennel yesterday. They carry on a black market operation in Seeing-Eye Dogs. Actually, the dogs are rejects from the LITE stock—some with a devious VE index, others—well, others just not docile enough to be trusted with a blind person."

Curt tensed anxiously, then smiled. Again hope flared in the frightful darkness.

Alex helped him out of the car.

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"They insist on only one thing — that we keep the animal muzzled."

Eagerly, Curt went forward toward the dog's expectant whimpering. "We'll skip the muzzle in this case."

"But S-E dogs are hybrid *mastiffs!* This one weighs almost two hundred pounds!"

"No muzzle," Curt repeated obstinately. "That's no way to gain an animal's confidence."

"All right, then, no muzzle — but only if you don't try visual empathy *unless I'm with you.*"

"BRUTUS," Curt called the animal facetiously during a moment of buoyant optimism as he spent the rest of the day and the next morning winning the mastiff's trust.

And the name, Curt realized as he knelt beside the Seeing-Eye Dog in the living room and sent his sensitive fingers over its powerful flank, was indeed appropriate.

Brutus was huge. There was the feel of lurking might in every sweeping line of its broad back and thickset shoulders. And in the great head and blunt, wrinkled snout — homely as they must have been visually — there was a tactile revelation of gentle and noble tolerance.

Curt rose and the dog reared up, dropping its forepaws on his shoulders. Laughing, he staggered back under the weight until he fell clumsily on the sofa.

Alex came over and disentangled them.

"By tomorrow," he said encouragingly, "you ought to be ready to try a first contact."

Curt tensed on the sofa. Why not now? There wasn't much time left — Sue was due in next week and already it was Friday.

Straining, he reduced his thought intensity to a mere whisper of force, remembering the finer points of receptive concentration.

Projecting an empathic connection, Wendt had said, was like singling out an obscure corridor in the brain and imagining a beam of perceptive force shining down its length — into the primitive consciousness of the dog.

Delicately, Curt told himself. In his case, the corridor must be a tenuous, hollow thread, pliable and gossamer. And the beam itself had to be pale and extenuated. He added a modicum of intensity to the fancied ray of perception.

And there was contact!

Nothing that could be called vision — not yet — only the merest glimmer of external light. But that was all he wanted now. He must be meticulous, allowing Brutus ample time for reassurance against the presence of something alien in its mind.

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The mastiff whined restlessly and Curt heard the heavy fall of its pads on the carpet as it paced.

The perceptive thread wound intimately around isolated conceptual islands in the dog's consciousness – precincts of pseudo-semantic thought. One prominent cloud of swirling concept haze carried the abstraction *afraid*.

And Brutus' whine climbed to a yelp.

"Curt! You're trying it?"

He nodded.

"Easy, then," Alex cautioned. "Remember – delicately!"

CURT went more slowly, tarrying purposely among the shallow thought patterns. He recognized some of the elemental animal ideas and discerned their conceptual connotation. There was the pre-eminent *me-I* of self-identification – the eager predicated *food-stuff* – the avid yearning of the affirmative *want* – the reverential idea mist of the mystical *man-thing* and its complementary plural, *more-than-one-man-thing*.

Boldly now, Curt bolstered the empathic connection, seeking out the animal's visual receptor system.

And there was light!

Vaguely, he could see the outline of furniture, himself standing in front of the dog, the sunshine pouring in through the window.

But the mastiff's fear was like a great quaking vibration and the precincts of concept haze swirled and thrashed viciously: *me-I – afraid – man-thing – more-than-one-man-thing –*

Brutus reared in anguish and abruptly Curt's contact with the animal snapped, plunging him back into darkness. And Curt could hear the dog barging and barking madly about the room.

"Easy!" Alex shouted. "Break off!"

Curt thrust his hands up protectively. But suddenly the great animal lunged into him and sent him flailing backward. Somewhere in the room, furniture smashed and glass shattered.

"What happened?" he cried.

"The fool dog banged into a table. But he seems to be calming down now."

Groping, Curt went toward the sound of the mastiff's rasping breathing.

"Stay away!" Alex warned. "He's dangerous!"

But Curt's hands touched the great trembling body and he ran his fingers tenderly over the furrowed coat of the dog's nape, whispering reassuring words. Its whimpers subsided eventually and it turned to lick his hand.

"We've got to muzzle the beast," Alex said resolutely.

Curt shook his head. "This is bad enough."

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THAT NIGHT, only a short while after Alex phoned to say he wouldn't be in until late, the facsimile teletype's bell signaled reception of a telegram while its keys clacked out the message.

Curt tore the sheet out of the machine and held it in front of his eyes, before he remembered he couldn't see. Bitterly, he crumpled the paper and thrust it in his pocket.

He felt his way to the window. With the breeze on his face, he tried to visualize the full Moon that would be rising in the east.

"Brutus," he called softly.

The mastiff's chain dragged across the supporting wire until the animal stood close enough for Curt to hear its friendly, excited breathing.

He toyed tentatively with the idea of attempting another VE contact, now that the distractions of the day were over and the dog was safely tethered.

Tenderly, he sent the perceptual beam through the narrow corridor to the animal's mind.

And again he encountered the ethereal islands of conceptual constructs. There was the vague reflection of his own image, all cloaked in the idea haze *man-thing*. And in symbolic nearness was the animal's sphere of self-identity. Only now it was more than *me-I*. It had taken on a new shade — *me-I-Brutus*.

Abruptly he realized the *man-thing* image had grown stronger and was swimming into resolution. Now it seemed to be centered in a rectangular frame, silhouetted by brilliant backlighting.

Then he recognized the frame as the window in which he stood. Without complications, he had established visual empathy and was now looking at himself through the eyes of the animal!

Brutus gave a soft yelp. But Curt readily recognized that it was not a cry of distress, only alert expectancy.

Good boy, Brutus! he thought.

The subvocal praise struck responsive idea chords in the mastiff's mind.

Me-I-Brutus — good took shape sluggishly, with a tinge of simple, unaffected pride. Then a new concept haze formed, clouded with perplexity: *Boy?*

Curt remembered the telegram and broke the connection. Hurriedly, he felt his way to the back door and stepped outside, re-establishing contact.

Vicarious vision came instantly. And Curt watched himself walk down the steps — cautiously at first, then more confidently as he realized there was efficient coordination despite the shift to external perspective.

He struck out across the yard toward the dog, clearly seeing and avoiding the bench that was in his

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path. The mastiff started to turn its head aside, but Curt canceled the motion with a deliberately soft impulse.

Standing before the animal, he ironed the telegram smooth against his thigh. Then he held the message in front of the dog's face.

Brutus started to sniff the paper, but with a gentle command, Curt stayed the action and the dog sat motionless, its eyes on the telegram. The bold type stood out prominently in the moonlight:

DARLING — DOCK MONDAY MORNING. FLY HOME IMMEDIATELY. CAN'T WAIT. WOULD TWO WEEKS FROM TODAY SEEM TOO ANXIOUS? I LOVE YOU — SUE

WITH THE housekeeper off for the weekend, Alex fixed breakfast the next morning. But Curt showed little interest in the food.

"You should have been here, Alex!" he said enthusiastically. "It worked just the way Wendt said it would."

"What do you suppose made it work?"

"I don't know, unless it was because I tried it on the spur of the moment. All the other times, I spent hours anticipating visual empathy, building up a tension that could be released only telepathically into the animals' minds."

"That might be it," Alex said thoughtfully. "At any rate, I'm glad we're making progress — with Sue due in day after tomorrow."

Curt leaned forward excitedly. "Do you realize if she had been out there last night, she wouldn't even have suspected I was blind?"

"It was that good?"

"It was remarkable. Wendt was right — vicarious vision is better than direct sight. You can see yourself in true objective relationship to everything around you."

Outside, Brutus' chain slid noisily along its race as the mastiff covered its range again and again in a bounding, playful stride.

Alex's chair skittered back. "I've got to run into town and get Jackson started on the Petersburg job specifications. When I come back, we'll see what you can do."

After he had gone, Curt roamed restlessly through the blackness of the house, struggling not to anticipate the next attempt at establishing visual empathy. Now he was sure trying too hard had been the cause of all his trouble.

But as he went from room to room, he found his thoughts returning uncontrollably to the mastiff, his mind involuntarily trying to make VE contact. At the Institute, they had told him it would be that way. They had said he would find sight contact — even

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motor control—an automatic process. They had promised no more volition would be needed to command the dog's visual faculties than had been required for his own.

He was in the hallway when the phone rang. Rather than rerun the obstacle course to the living room, he felt his way toward the extension in Alex's room.

His groping hand knocked something off the night table before he found the phone.

"Mr. Markson?" a girl's voice inquired.

"Yes?"

"This is Westside Kennels," she said. "Just calling to see whether you're satisfied with the dog."

"Brutus? He's fine."

"We thought you'd be pleased. Actually, I just wanted to make sure you got the animal okay. We don't usually deliver them sight unseen and install them in the yard."

Curt felt his back tighten. Preoccupied with the conversation, his mind had unconsciously sent out a perceptual thread to Brutus and he had gotten a vicarious glimpse of the yard.

"Mr. Markson?" the girl asked.

"Yes. Everything's all right. The dog's fine." Deliberately, he closed off the involuntary contact with the mastiff's mind.

After he had hung up, he felt along the floor for the object he had knocked off the table. Almost immediately, he found it—a flat steel file. When he opened the drawer to place it inside, his hand encountered an object whose identity escaped him at first. Curiously, he ran his fingers over the thing. It was a gardener's hand rake.

THAT AFTERNOON, Brutus romped playfully in the living room, the thud of its pads resounding against the carpet like the beat of a drum wrapped in wool.

Alex led Curt to a straight-back chair.

"I think it'll be better," he suggested, "if you relax first, try to ease off all the tension."

"I've been anticipating this session too much," Curt said apprehensively. "Suppose it doesn't work?"

"Get your mind off it for a while. Think about something else. I'll call the signal on establishing VE."

Curt summoned a mental image of Sue as she had been three months earlier, on the day she sailed with her mother on the tour.

Brutus quieted, padded over to sniff his trouser legs. But Curt tried to keep his thoughts off the dog. Recalling the accident was an easy way of doing that—the plane sputtering only minutes af-

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ter takeoff, stalling, falling away into the wooded section—

"*Now,* Curt!" Alex said softly.

Hesitantly, Curt gave rein to the eager niche of his mind that recoiled before the darkness. Vicarious vision snapped on like a floodlight and the animal whined briefly.

Curt saw himself seated in the chair. In a mirror behind him, he watched the dog sitting on its haunches and disinterestedly licking its chops.

Now the mastiff's crude thoughts were weaving warm emotions of delightful fondness and loyalty, gratitude—monotonous in their fawning simplicity, yet sincere and reassuring.

Man-thing good boy . . . Food-stuff? . . . I-Brutus thirst-water. . .

Curt turned triumphantly toward Alex and, compliantly, the dog's head swung in that direction, centering on the other who stood by the door.

Then Brutus went berserk.

Sickening with disappointment and fear, Curt watched fierce spasms of pain rack the primitive processes of its mind.

THROUGH the mirror, he saw the great dog rear up, growling savagely. Then the visual contact broke and he heard the mastiff charging in agony around the room and crashing into the furniture.

Alex shouted in alarm and the door slammed shut, muffling the outcry.

Helpless before the rampaging brute, Curt held his contact with the animal's nonperceptive consciousness, trying to soothe it.

Easy, boy, he thought desperately. *It's all right, Brutus!*

Hurt! I-Brutus afraid! Even despite its anguish, shreds of pseudo-rational thought seeped through to Curt. *Man-thing, other-man-thing, man-thing, other-man-thing.*

Brutus was trying to identify the source of its distress!

Curt rose and stumbled around behind the chair, putting it between himself and the crazed animal that raged in the impenetrable darkness.

The ponderous wheeling weight lurched against the chair and the impact hurled him to the floor. Then there was the sound of angry teeth crunching into wood, splintering the chair, scattering it about the room.

"Alex!" he called frantically.

The door opened and the dog flung the chair aside and rushed growling across the room.

Alex screamed in pain. Then there was silence as Curt traced Brutus' racing claws down the polished hallway floor and out the back door.

"What happened? Alex! You all right?"

There was movement on the

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floor by the door and Alex swore painfully. "Goddam monster got his teeth in my arm!"

Curt reached him and felt the sleeve, wet with blood.

"I went out to get my automatic," Alex explained. "But it wasn't loaded. There wasn't time to look for bullets."

"I'll call a doctor."

"It isn't that bad. I can drive to the clinic. But leave that damned animal alone!"

SUNDAY AFTERNOON, Curt stood disconsolately in the doorway while Alex cleaned up the shambles the dog had made of the living room.

Curt traced the other's progress acoustically. "Will you drive me to the airport in the morning?"

Alex was silent a moment. "You've decided to meet Sue anyway?"

"No. I'm taking a plane out before she arrives."

"You're not giving up that easily!"

"But what else is there?"

"First you're going to try this visual empathy thing *my* way. We'll have one more session – in the garage. Brutus will be chained down. Then you're going to pour it on with all the mental strength you've got!"

"But –"

"There are two ways of mastering a stubborn animal. In this case, consideration and kindness aren't paying off. We'll try it the other way."

Curt shook his head. "No. I've had enough. I should have listened to Wendt."

"I'm sure it will work, Curt. Think it over. When you decide, let me know. I'm going to rest up. This arm's giving me hell."

Curt sat before the window throughout the afternoon, feeling the waning warmth of the Sun on his face, listening to the clanking of Brutus' chain as the damp breezes of twilight came in to rustle the curtains.

Then quite suddenly – just as the hall clock rang seven – he decided.

He went to the phone and had the operator put him through to the owner of Westside Kennels.

"I'm calling about a dog I got Thursday," he explained when the man answered. "I want you to pick it up in the morning."

"I'm sorry, but we don't make any adjustments –"

"I'm *giving* you back the animal," Curt said.

"That's different. Who did you say you were?"

"The transaction was in the name of Alex Bardell."

There was a pause. "I don't recall that name."

"It's the animal you delivered and put on a race in the yard."

"Oh, the S-E mastiff? I didn't

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recognize your voice, Mr. Markson."

"That's understandable," Curt said irritably. "You haven't heard it before."

"What do you mean? We spoke on the phone three times about the animal before you said to send it out."

Curt frowned uncertainly. Then he heard a click in the receiver and remembered the extension in Alex's room.

"You still there, Mr. Markson?"

"It's okay," said Curt. "Thanks."

PENSIVELY, he replaced the phone in the cradle. Why, he wondered, had Alex arranged the purchase of the dog in his — Curt's — name? More important, why had he been listening in on the telephone conversation? It was almost as though Alex had been trying to create the impression that he'd had nothing to do with buying Brutus. Why? Because he hadn't wanted to become involved in a black market deal?

Still puzzling over the click of the extension phone, his thoughts went back to the last time he had used the instrument in Alex's room. And he remembered the file he had knocked off the table and the hand rake he had found in the drawer.

He stiffened misgivingly. Now that he recalled the incident, there had been something *odd* about the rake. All but three — or was it two? — of its prongs were missing. And —

The door closed softly behind him and its lock clicked shut. Then he heard the light switch snap on.

"Alex?" he called apprehensively.

Alex laughed. "You look as though you've doped out something rather unpleasant."

"Like what?" Curt asked, befuddled.

"I was afraid you had become suspicious when you found the file on the night table yesterday. But then I realized that if you had suspected anything then, you would have left it on top of the table and not in the drawer with the rake."

The remaining prongs on the hand rake, Curt remembered now, had been sharpened — like the fangs of a dog!

"But after hearing that phone conversation," Alex went on, "I knew it would take someone with a lot less sense not to have figured out everything then."

"The rake!" Curt blurted. "Brutus!"

"Brutus? I was hoping there would be another session with the dog. I was going to let him work you over, then finish the job with the rake. But since you forced the issue, I'll have to lock him up in here and let him supply all the evi-

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dence I'm going to need."

"I don't think he'll attack me."

"Oh, but he will," Alex said. "I can pour enough pain and confusion into his mind to make him tear the whole house up. You see, I had a lot of practice with empathy and control when I attended the sessions with you at the Institute."

"*You* were driving Brutus mad!"

"Of course. In fact, I'm the reason you were rejected by LITE. You're probably as efficient a VE contact controller as the next guy. But I couldn't let it be that way. Because then you'd learn that with an S-E dog, blindness wouldn't be any obstacle at all between you and Sue. So I was always there to agitate the dogs and make sure you'd be rejected; to engineer a deal so it would appear that you yourself bought a dangerous black market animal; to keep enraging Brutus telepathically—"

CURT lunged for the phone. But Alex's fist exploded against his face and he dropped to the floor. Water sour with the smell of stale flowers spilled into his face and a hand pulled him roughly to his feet.

"Even letting you get by with that successful session with the dog Friday night fitted in well with my plans," Alex went on softly. "It gave you confidence so you'd be encouraged to continue your attempts at VE."

Curt sent eyes that couldn't see darting about the room and Alex laughed at his desperation.

"Even this gash on my arm is a bit of luck. If I have to, I can show the dog was just as much a threat to me as it was to you."

"They'll wonder why you didn't help me when the dog attacked," Curt pointed out.

"Not a chance. You see, I left for Cleveland this morning on the two-fifteen. Several persons saw me buy a ticket and get on the train. But I made certain they didn't see me get off before it left. Others will see me return tomorrow morning. In between departure and arrival, I haven't left the house and the car's hidden in the garage. I think I'll even go to a hotel when I get in tomorrow and let the housekeeper find the mess here."

Curt stood frozen against the wall, wrestling helplessly with his thoughts. But what chance did he have—blind? Outside, Brutus yawned audibly and stirred inside the kennel next to the house.

"But you know something, Curt? I don't think there'll even be an investigation. What happened will be clear enough."

Curt listened helplessly to the approaching footsteps.

"Was it Sue?" he asked.

He imagined he could see Alex's

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characteristic shrug. "Sue and the business, of course. You didn't think I would let you have her so easily, did you? And with the arrangement we have, this is the only way I can own the firm outright."

"The crash, too, Alex?"

HE tried to hide the hope on his face as he suddenly sent a thread of perceptive empathy to Brutus' brain. A nocturnal scene of the yard formed sharply in his mind, framed in the arched entrance to the dog house.

"Naturally the crash, too," said Alex. "That seemed like the simplest way. After it failed, though, I couldn't try anything like that again. But when you started your sessions at LITE, I saw what could be done."

Gingerly, Curt made the animal rise and step out of the kennel without noise. But Brutus' incessant low-level thoughts seemed to blare deafeningly.

I-Brutus good boy. Man-thing—

Curt snipped them off, leaving only the visual empathy corridor. Carefully, he directed the mastiff toward the house. But even if he could find some way to release the dog and bring it crashing through the window, what good would it do? Alex was still there to drive it into a frenzy.

Curt tried another desperate play for time. "But why didn't you let me pull out? I wanted to."

He brought the dog into a rampant attitude, straining upright at the end of its taut chain—but silently.

"Pull out?" Alex said. "I'm not that naive. Let you decide later to have another try at the Institute and find out you could get along with an S-E animal?"

Swiftly but cautiously, Curt sent the animal prancing sideways until its head was lined up with the window. Now he could see vicariously into the room!

Alex was in front of him, the rake with its sharpened prongs drawn back and aimed at his neck. Alex swung the tool and Curt ducked, straightening with an uppercut that couldn't have been better directed even if he had coordinated it from the autoperspective.

He left Alex limp on the floor and groped his way out of the house to Brutus.

"Come on, boy," he said, unchaining the animal. "Let's get out before he comes to and starts throwing monkey-thoughts into the works."

Man-thing good boy, Brutus prated as Curt ushered the dog onto the car seat beside him and drove off. *Other-man-thing bad.*

AT THE airport, Brutus trailed dutifully behind them as Curt carried Sue's bags toward the car.

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He had kept the dog at a distance so she wouldn't suspect yet.

Ahead, Sue's mother obligingly stepped into the cab Curt had ordered for her.

His perspective was a view of their own backs, with the expanse of the airport and its passenger aisles stretching out before them.

Curt held her hand more tightly. "Watch out for that crack in the apron," he warned.

She laughed lightly and drew up, turning toward him. Puzzled, he sat Brutus on his haunches and directed the animal's gaze on her attractive profile while he guided his own sightless stare full into her face.

"All right, Curt," she said cheerfully. "I'm convinced. You can call off the demonstration."

Stunned, he backed off. "You knew?"

"Of course. Alex kept me informed. He wasn't at all optimistic about it, though. He was sure you wouldn't qualify at LITE. But I knew you would."

He let the breath rush out of his lungs. "Then why didn't you tell me you knew?"

"Because I wanted you to see that blindness would make no difference between us."

Blithely, she kissed him on the cheek, then turned toward Brutus. "So that's the mutt? Come here, boy. We've got to start getting acquainted."

Curt let her drive to town while he sat back enjoying the scenery — and her.

— DANIEL F. GALOUYE

ANY QUESTIONS?

Since Willy Ley began his science department here in March, 1952, the postman has been staggering in with queries from readers . . . and the volume of mail has increased steadily. This, instead of distressing us, proves that it is a recognizedly valuable readers' service feature.

We're happy. Mr. Ley is happy. Those who are having their questions answered are happy.

But what about you?

If anything in science puzzles you, ask Willy Ley!

And don't think your questions have to be the kind that only technicians and researchers would ask. This department is run for laymen who don't know where to go for such information, not for the professional who does.

The questions with the widest popular interest will be answered in the magazine.

Send in your queries right now. All we request is that you keep them short and no more than one or two at a time. And please add your name and address; they will be kept confidential if you want, but we can't run anonymous letters.

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CHAIN REACTION

By BOYD ELLANBY

MACPHERSON shuffled the cards over and over again. His hands were almost steady.

"Want to place a limit on the bets?" he asked.

His two colleagues who had made the night drive with him from the University said nothing, but Rothman laughed.

"Today?" he said. "Today, the sky's the limit."

MacPherson rested the deck on the table and watched as Rothman stood up to look through the barred window at the glittering Arizona desert. Rothman had got thinner during his months of confinement; his shoulders were bony beneath the gray hospital robe and his balding head looked like a skull.

"Are you going to play?" asked MacPherson. "Or is poker too childish an amusement for a mathematician?"

Rothman turned his back to the window. "Oh, I'll play. When three old friends from the Project suddenly turn up for a visit, even a madman will string along."

Shuffling the cards again, MacPherson wished the other men would say something; it wasn't fair of them to make him carry

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Would this be the last poker game — with all life at stake and every card a mere deuce?

Illustrated by DOKTOR

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the conversation. Professor Avery, who had cut his physics classes in order to join the morning's party, sat in glum silence. His plump face was pale, and behind thick-lensed spectacles which enlarged his eyes grotesquely, he blinked as he watched the flickering cards. Dr. Neill, from Physical Chemistry, was tapping his toe against the table leg, watching Rothman, who stood at the window, waiting.

"But we can't have much of a game with only four people," said Rothman. "We ought to have a fifth."

"Maybe we can find someone." MacPherson walked to the locked steel door and rattled the rectangular lattice set in at shoulder height, put his mouth to the metal bars and called out.

"Hey, Joe!"

AN attendant in white uniform shuffled into the corridor of closed doors, carrying a tray with one hand and scratching his head with the other.

"How about joining us for a game of poker?"

Joe shook his head and grinned. "Not me, Professor! I start buddying around with the loonies, I lose my job."

"But we're not inmates!"

"Maybe not, but Dr. Rothman is."

"Doesn't prove I'm crazy, Joe," said Rothman. "Conversely, not being inmates doesn't prove these men are sane."

"It's a fact you don't look any crazier to me than a lot of professors," confessed Joe. "I don't know. All I know is, *I'm* not crazy enough to break the rules and lose my job. Besides, you longhairs wouldn't stand a chance at poker with me."

Still grinning, he shuffled out of sight down the hall.

MacPherson sighed and went back to the table. "Well, we'll have to get along with just the four of us."

"There's always the unseen guest," said Rothman, "but you won't need to deal him a hand. He already holds all the cards."

Neill looked up. "Stop hamming and sit down. Quit making like a maniac. It's not even a good act."

"Okay." Rothman drew up a chair. "Now what was said about limiting the bets?"

"Why bother setting a limit?" said Neill. "We're not likely to mistake each other for millionaires and we all got exactly the same pay when we were on the Project. Unless your sick pay has had two or three zeros tacked onto it, you're not going to be making any wild bets, and as for the rest of us—"

"University professors are still being paid less than nightclub dancers," said Avery. "You're

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lucky to be out of the rat race, Rothman. While we worry about how to pay the grocery bill, you can relax, eating and sleeping at government expense. You never had it so good."

"Maybe you'd like to get yourselves committed and keep me company?"

MacPherson rapped the deck on the table. "Stop that kind of talk. We came here to play poker."

"Did you?" asked Rothman, grinning. "Then why don't you deal?"

"Cut, Neill?" said MacPherson. As he shot the slippery cards over the table top, each flick of his thumb watched by Rothman's intent eyes, he regretted this impulsive visit; it now seemed a gesture without meaning. He wondered whether the others were as nervous as he was.

On the drive over from Los Angeles during the night, Neill had seemed calm enough and even Avery, who had changed a lot during work on the Project, had chatted with them unconstrainedly. It was hard to be certain what other men were feeling, even when you had known them a long time, but it could not be pleasant for any of them to be visiting a former colleague who had been removed from the Project directly to a sanitarium.

"Tell me something," said Rothman as he picked up his cards. "Do you still think I'm crazy?"

"Don't be an idiot," MacPherson snapped. "Do you think we'd cut our classes and drive nearly five hundred miles just to play poker with a lunatic?"

"No," said Rothman. "That's how I know. But why aren't you frank about it? Why keep on pretending there wasn't a special reason for your visit?"

NEILL was beating his foot against the table leg again and Avery's eyes were hard and staring as he examined his cards.

"Who'll open?" MacPherson asked. "I can't."

"I can," said Rothman. "I'm betting one blue chip. Listen, Avery, why won't you look at me? If you think I'm hamming, what do you call your own act? How long are we going to go on kidding each other? They've shut me up here, but that doesn't mean they've stopped me from logical thinking. My three old friends from the Project don't turn up in the middle of a Friday morning just to calm my fevered brain with a card game."

"What's wrong with poker?" demanded MacPherson.

"Poker? Nothing. I know — It must be the test. Total conversion of matter to energy. Not just a minute percentage any more — *total* conversion. They've finished the set, haven't they? They're

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ready to test. They're going to disintegrate Waaku, aren't they? It must be today. Then this is the day the world ends. Tell me, when is zero hour?"

Neill's cards had slipped from his fingers and he stooped to the floor, fumbling for them. Avery was bending one corner of a card, creasing it, smoothing it out, and creasing it again. Nobody was going to answer, MacPherson realized. They were leaving it up to him.

He spoke sharply. "You're getting onto forbidden ground, Rothman. You know we're not allowed to discuss the Project with you. We're allowed to visit you only under the strictest promise not to speak of it at all. You're certainly rational enough to understand what the therapists have told you, that you'd get well easily enough if you'd stop worrying. Forget about zero hour. Everything's going to be all right."

Rothman turned to look out the window. "Is it today?"

"How should we know? We're only innocent bystanders now, like you. Remember, we all left the Project over six months ago, except Avery, and last month they let him go."

Neill had rearranged his cards now and he looked at them instead of Rothman as he spoke. "There's nothing to worry about. Your calculations were wrong. The test is not going to get out of control—if and when they make it. But they don't tell us things any more."

"Since they fired you," said Rothman.

"That's right, since they fired us," Neill said. The creased corner of a card suddenly broke off in his fingers.

"If you didn't believe in my calculations, why did you back me up? I didn't ask you to. If you didn't believe in the danger, why didn't you stay out of the argument and keep your jobs? It wasn't your fight. You could have kept out of it—or attacked me, like Avery."

"All we did was insist that even if you had made a mistake in your calculations, that didn't necessarily prove you were crazy," said Neill. "We didn't know whether you were right or not. We couldn't argue about the math. Avery tore that to pieces and the boys at Columbia and Harvard backed him up. MacPherson and I aren't competent to check your math. To us, you didn't seem any crazier than the people who sent you here. But after you'd scared them silly, they had to do something to stop your scaring other people."

HE turned to pick up his cards again, but stopped at the sight of Avery. Avery was stand-

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ing and crumpling a card spasmodically, his lips were moving without sound, and he was breathing rapidly.

"Look here," said MacPherson. "You'd better change the subject. If little Joe passes by the door and hears us talking about the Project, he'll have our visiting privileges revoked before you can say nuclear fission, and they'll stay revoked forever."

"How long is forever?" asked Rothman.

Avery threw down his cards and walked to the window. Through the bars, there was nothing to be seen but the expanse of sand, glinting in the morning sun, and a cactus plant casting a stubby shadow. He whirled to face the others.

"Look, MacPherson," he burst out. "I'm fed up with this game. Snookums Rothman mustn't think about the Project any more, so we mustn't say the naughty word. But we were all in it together at the beginning and there was a while when we were all every bit as scared as he was. Why not tell him we came this morning in case – just in case – he'd heard about the test and was worrying? What's the harm in telling him what the whole university knows? That zero hour is today, this morning, now!"

"Shut up, you fool!" said MacPherson.

But Rothman glanced at his cards again, then looked up. "When does it begin? What time is it now?"

"Don't answer!" shouted MacPherson. "Are you trying to knock him off balance again?"

"I will answer!" said Avery. "I'm going to tell him. He scared us silly with his calculations; now let us scare him with some cold facts. It'll do him good. Maybe when the test is over, if he finds – I mean *when* he finds – he was wrong, he'll be cured."

"Yes, and maybe he'll really be crazy."

Grabbing Avery fiercely by the arm, MacPherson tried to drag him to the door, but Avery broke away.

"Listen, Rothman!" Avery's breath was coming quick and shallow. "Today is the day! Zero hour is eleven o'clock this morning!"

MACPHERSON sagged. No one spoke or moved as they all watched Rothman.

At last Rothman sighed, once. "What time is it now?"

From the door came a scratching sound. MacPherson turned to see Joe, grinning at them through the steel lattice.

"How's things?" Joe wanted to know. "Thought I heard a commotion in here. Doc Rothman's not acting up, I hope?"

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"Everything's under control, Joe," MacPherson assured him. "Just having a friendly game."

"Don't cheat while they're watching you," said Joe, and his face disappeared.

"Well, the murder's out," said MacPherson.

"No use kidding you any longer," Neill said, fanning his cards. "Eleven o'clock this morning. Six o'clock tomorrow morning, Waaku time. But it's just another test. Nothing's going to happen."

Avery took off his glasses and began to polish the lenses. "Any idea of a possible chain reaction is ridiculous. As a matter of fact, I recently spent a full week checking the math again myself, so I

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know. But we knew how you felt about it, Rothman, and we didn't want you to be worrying here all alone, in case you'd found out. That's why we came."

Rothman was looking out the window. He did not answer. Slowly MacPherson went back to his chair and picked up his cards. "And now how about playing some poker? Rothman, you opened for a blue. What about you, Neill?"

"I'm staying," said Neill, shoving in a chip. "Always was a gambler. I'm going to stay till the cows come home."

"What time is it?" Rothman asked. "I haven't got a wristwatch. They think I might break the crystal and cut my throat."

MacPherson slammed down his cards and jerked his watch from his pocket. "What does it matter what time it is? Why couldn't they give you a watch with a plastic crystal? If you have to know, it's eleven-forty."

"And thirteen seconds," added Neill.

"Then it's already started," said Rothman.

HE leaned his head against the back of his chair and closed his eyes. "It's on its way now. There's somewhat more than a third of the Earth between us and Waaku — the place where Waaku was, I mean. The disintegration wave is moving slowly. The seismic wave of an earthquake would get here in about fifty minutes, more or less. But the shock wave from Waaku, traveling somewhere around five thousand miles an hour, will need about an hour and seventeen minutes, plus or minus a minute or so. That means it will reach us in about thirty-seven minutes from now, and the disin-

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tegration wave is following close behind. Well, nice to have known you, fellows. Anyone want to check my math?"

He waved toward the desk behind him, piled high with manuscript and a sprawling heap of books on which rested a slide-rule.

"Calm down," said MacPherson. "Nothing is going to happen. Damn you, Avery! Are you proud of what you accomplished?"

Avery glared. "It'll do him good! He's got to learn to face reality, like the rest of us. In a little more than half an hour, the test will be finished. The world will still be here. Rothman will have to admit his equations were wrong – and then he'll be cured."

Rothman leaned forward. "Or contrariwise, Rothman will *not* have to admit he was wrong and Rothman will *not* be cured! If I made a mistake in my math, why couldn't anybody put his finger on it? I'm not so crazy that I wouldn't be able to see an error in calculus when it was pointed out to me. If you're sure my calculations are wrong, why do you look so frightened?"

"Do we have to go over all that again?" said MacPherson. "The boys at Columbia told you where the mistake was. It's where you inverted that twelve-by-twelve matrix. Didn't you bother to check the inverted matrix?"

"The same old tale." Rothman picked up his cards. "No mathematician will ever admit that another mathematician could invent a method beyond his comprehension. Still harping on an error in my inverted matrix. What time is it now?"

"There's no doubt that your calculations are wrong," said Neill, "but I still don't see why we have to insist on proving it the hard way. With bombs, why do we need to fool around with the total disintegration of matter? Sure, I know the new model releases a googol times the energy you get out of uranium fission, but who cares? There's plenty of uranium for our needs."

"The trouble with uranium is that it doesn't make a big enough bang," said MacPherson. "People aren't impressed by it any more. The same goes for plutonium, even for lithium, at least for any size bomb we can make. The idea is to show the world something so convincing that they'll never even think of a war again. When they see every island in the Waaku chain wiped off the map, they'll get the point."

AVERY creased another card and cleared his throat. "*Did* you check the inverted twelve-by-twelve, Rothman?"

"I suppose you think I forgot to. Have *you* checked it?"

"Yes, I have. I may not know

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much math, but I did check it."

"Even after the Columbia boys said it was nonsense? Well, does it come out right?"

"No, it doesn't! You multiply the inverted matrix by the original and you not only don't get zeros for all elements outside the diagonal, you get a haphazard assortment of ones and twos. Worse still, every element in the diagonal comes out equal to zero. The product of the two matrices is about as different from the identity matrix as anything could be. You're one of our most brilliant mathematicians – how could you manage to make so many mistakes in one set of calculations?"

"Did I tell you that was an inverted matrix? Maybe, for this problem, you need something a little more advanced than algebra. Anyhow, if my math is all wrong, why did your first report okay it?"

"What do you mean, my first report?"

"The one you sent to Prexy. The one you later called in and burned. Except Prexy showed it to me and I photostated it. Here." Rothman reached into the pile of papers on his desk and drew out a little envelope. It contained photographic prints. He held one before Avery's glasses. "Does that look familiar?"

Avery drew his hand across his forehead, but did not reply.

"Is that true, Avery?" asked MacPherson. "Did you make a report okaying Rothman's calculations and then withdraw it?"

"Well, what if I did? The report didn't seem to make me much more popular than Rothman was. What if some very influential people in Government explained to Prexy, and he explained to me, just how unpopular that first report might make me? Or suppose they didn't. Maybe I simply didn't find the mistakes in the math until later." Avery kept looking at his cards as he spoke.

"Oh, great," said MacPherson. "Rothman gets put away here, Neill and I lose our jobs, and there's hell to pay in Washington, all because Avery says Rothman's math is full of holes. Now it turns out he wasn't sure and maybe was pressured into it. Grand. Between a screwball and a skunk, I'll choose the screwball. Maybe if Avery had stuck to his guns, there wouldn't have been any test."

"IT doesn't matter," said Rothman. "Avery was probably warned to mend his ways. I was. Or maybe he couldn't face the truth. I'm sure he's been much happier, the last few months, believing I'm crazy. Anyway, I don't blame him any more. Maybe my math will soon speak for itself. For your benefit –" he turned to

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Avery—"I may point out that the errors you said you found affect only the *velocity* of the wave of disintegration. So what if that isn't quite right? The proof that the reaction will be self-sustaining is independent of that."

Avery was white with rage. "The proof, as you called it, that the reaction will be self-sustaining and will consume the entire substance of the Earth doesn't make sense, either. You used D as an operator where it should have been a constant. That's what finally made them certain that you were insane."

There was a rap at the door and Joe poked his head in. "Lunch, Professors! Twelve o'clock, high noon, like they say. How about some turkey sandwiches?"

MacPherson began to sweat; the thought of food made him feel sick.

Was it possible, he wondered, that in spite of everything, he was not quite sure? He looked at Neill and Avery, but they had turned their heads away.

"We won't bother with lunch, Joe," said Rothman.

"Must be a pretty good game if you won't even knock off to eat," said Joe. "Well, will you at least mark your menu for tomorrow?"

"For tomorrow? Tomorrow isn't going to come, you know."

"Nuts," muttered Joe as he closed and locked the door. "Pure nuts."

Avery cleared his throat, and his voice was thin. "Look here, Rothman! If the Universe were composed of matter as unstable as you claim, it would have ceased to exist long ago. Somewhere, somehow, in the infinity of chance events since the creation of the Earth, something would have occurred to start the self-sustaining chain reaction, and all matter would have been annihilated."

"Are you trying to prove something to yourself?" asked Rothman. "Surely you don't equate infinity with a mere four billion years. That's a finite time—long enough for the more dangerous radioactives to disappear completely, of course, but not long enough for all possible chance events to have taken place. Anyway, I never have asserted that the reaction would reach from Earth to the other planets, or even to the Moon. The Universe, including the Solar System, will still go on. But our old Earth is going up like a pile of magnesium powder mixed with potassium chlorate when you drop a lighted match on it."

AVERY wiped his forehead. "I don't know why I keep arguing with a lunatic. But you know yourself that the value you give for the integration constant in

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those equations is a pure guess, only you spend ten pages of doubletalk trying to hide that fact. If the constant is the one you give, why, sure, then you get a chain reaction. But you made it up! Who ever heard of a constant of that magnitude in the solution of an ordinary differential equation?"

"That's one criticism of my work the Harvard and Columbia boys never mentioned."

"Okay, then I mention it. You're crazy!"

"Are you sure?"

"Positive!"

"Then why can't you forget the approach of zero hour? I'll tell you why and you aren't even making a good show of hiding it. You know that, compared to mine, your knowledge of mathematics is about on a level with that of a college sophomore. Deep down, you know that my calculations were correct. You are convinced — *convinced* — that the bombing of Waaku has already started a chain reaction. And that about seventeen minutes past twelve, around eight minutes from now, the shock wave will reach us, and then the wave of disintegration. Look out of the window! See that cactus in the sand, with its little yellow flower? It will be annihilated. All that desert will go, too—every pebble, every grain of sand. Everything you see, and you yourself, will be disintegrated, transformed into energy!"

Suddenly he relaxed into a grin and softened his voice. "I thought we were playing poker. We're waiting for you to bet. Why don't you at least look at your cards?"

Avery opened his mouth, then closed it, and picked up his hand, riffling the five cards.

"I'm staying," he said. "Here's your blue and I raise you a blue."

Slowly the others picked up their hands and stared at the cards. MacPherson scarcely looked at his as he spoke.

"I'm staying." He picked up the deck. "Cards, gentlemen?"

Rothman shook his head. "I'll play these."

Neill took two. "I like to hold a kicker," he explained.

Avery and MacPherson drew three.

"I opened," said Rothman, "and I'll bet five blue chips."

"See you and raise you a blue," Neill said.

"I'll string along," said Avery.

MacPherson threw his hand in. "I'll let you guys fight it out."

THEY all looked at Rothman, who was studying his cards.

"I'll see you," he began, and paused. Then he shoved all of his chips into the pot. "I'll see you and raise you a hundred blue chips."

"Damn it, Rothman!" MacPherson protested. "I know we agreed

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on no limit, but if you go on playing like this, you'll lose more than you can afford."

"I've already lost everything," said Rothman, "and so have you. Don't you know what time it is? In a few minutes, none of you will be around to try to collect. What time is it now?"

Avery reached for his watch, then stopped.

Rothman turned his head. "What's that?"

Nobody moved.

A noise like the roar of a swift freight train rushed into the room, rattling the windows. The walls shook, the floor trembled, the slide-rule slid off the pile of books and clattered to the floor.

They jumped to their feet and Avery ran to the window, clutching at the bars.

"Not yet," said Rothman calmly. "The cactus plant will still be there, casting its little shadow. You might as well sit down and finish the game. That was only the shock wave. Have you forgotten that it is transmit-

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ted through the Earth faster than the wave of disintegration? We still have a few minutes left. Isn't anybody going to see my bet?"

Avery lurched to the desk, grabbed a remnant of torn paper and scribbled on it.

"I'll see you," he yelled, "and raise you a hundred and twenty-five billion blues!"

MacPherson walked to the window. "Look at the sky. This is it."

They all jammed against his back, trying to see the horizon, waiting. Avery dropped the scrap of paper and covered his eyes.

"What is there to see?" Neill whispered.

"I thought—there was a flash . . ." MacPherson's voice trailed off, and he rubbed his eyes.

"But I didn't see anything," said Neill. "There's nothing to see."

A MINUTE went by. The desert remained calm, the blue sky was unmarked by even a cloud, the air was still.

A second minute went by.

Neill drew out his watch, looked

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wonderingly at the steady march of the second hand. Then he turned and stumbled into the lavatory. They could hear his dry heaves.

Rothman's eyes wavered from MacPherson to Avery, and back to MacPherson, and he sighed.

"Looks as if I was wrong, gentlemen," he said. "Maybe I am crazy, after all. I wonder if that integration constant could have been wrong." He reached down to the floor to pick up the fallen slide-rule, sat down and drew a pad of paper toward him.

MacPherson leaned against the window, too weak to move. He saw Avery take his hands away from his eyes. He could hear the chattering of Avery's teeth, could hear them click as he clamped them together, trying to control his lips. It seemed a long time before Avery managed to speak.

"*You*!" cried Avery. He lunged forward, grabbed Rothman by the shoulder and jerked him to his feet. "This – will teach you – not to make – mistakes –"

He smashed his fist into Rothman's face.

Still MacPherson could not move, could not even shout. He could only listen to Avery.

"And this will teach you – not to set up matrices – that don't multiply – that burn up – the world –"

Again Avery struck and knocked Rothman to the floor.

Breaking through his paralysis, MacPherson clutched Avery by the shoulder, but Avery kicked at the man on the floor, again and again.

"Avery!" shouted MacPherson. "Snap out of it, man! It's all over! The test is finished. We're still here. Rothman was wrong, just as we always knew he was!"

But Avery was on his knees, pounding Rothman with both fists, sobbing out meaningless words, oblivious to the shouts outside and to MacPherson's tugging.

The door burst open and Joe rushed in, followed by two other attendants.

"What goes on?" After a glance at Avery's contorted face, Joe grabbed for his legs. "Send for the doc, boys. We're going to need help."

ONE of the men ran down the corridor while Joe and the others succeeded in pulling Avery away from Rothman, who struggled to his feet. A doctor came in with a loaded hypodermic. He gave Avery an injection in the arm.

"Go easy there," said MacPherson. "He'll be all right in a few minutes. He's had a shock, that's all."

"Shock," Avery mumbled.

MacPherson gripped Avery's arm. "Try to relax, man. It's fin-

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ished. We never believed in it, of course. But I'll admit it's a relief, even to me, to be *sure* there was no danger of a chain reaction at all."

Suddenly he felt cold.

There was no understanding in Avery's eyes. He slumped to the floor.

"Do you think he'll be all right when he comes out from under the drug?" asked MacPherson.

"I can't say," said the doctor. "I only saw him a few minutes, when you came here this morning. I thought at the time he was pretty disturbed. Much more than Rothman here. Next week, I think, we're going to send Rothman home."

Rothman wiped the blood off his chin and grinned weakly. "You don't mean that, Doc. I used the wrong integration constant in a little calculation. I must be crazy."

—BOYD ELLANBY

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